```
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* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1          Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2          "Ask CAS" for self-help around the clock
 NEWS  3  FEB 27  New STN AnaVist pricing effective March 1, 2006
 NEWS  4  APR 04  STN AnaVist $500 visualization usage credit offered
 NEWS  5  MAY 10  CA/CAplus enhanced with 1900-1906 U.S. patent records
 NEWS  6  MAY 11  KOREAPAT updates resume
 NEWS  7  MAY 19  Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30  IPC 8 Rolled-up Core codes added to CA/CAplus and
                  USPATFULL/USPAT2
 NEWS  9  MAY 30  The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02  The first reclassification of IPC codes now complete in
                  INPADOC
 NEWS 11  JUN 26  TULSA/TULSA2 reloaded and enhanced with new search and
                  and display fields
 NEWS 12  JUN 28  Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11  CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14  FSTA enhanced with Japanese patents
 NEWS 15  JUl 19  Coverage of Research Disclosure reinstated in DWPI
 NEWS 16  AUG 09  INSPEC enhanced with 1898-1968 archive
 NEWS 17  AUG 28  ADISCTI Reloaded and Enhanced
 NEWS 18  AUG 30  CA(SM)/CAplus(SM) Austrian patent law changes

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8
 NEWS X25      X.25 communication option no longer available

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* * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:39:33 ON 31 AUG 2006

=> file caplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
```

	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'CAPLUS' ENTERED AT 13:39:46 ON 31 AUG 2006
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FILE COVERS 1907 - 31 Aug 2006 VOL 145 ISS 10
FILE LAST UPDATED: 30 Aug 2006 (20060830/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.
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http://www.cas.org/infopolicy.html

```
=> s somatostatin or neurotensin or penetratine or bombensin
         19356 SOMATOSTATIN
           146 SOMATOSTATINS
         19365 SOMATOSTATIN
                 (SOMATOSTATIN OR SOMATOSTATINS)
          4752 NEUROTENSIN
            27 NEUROTENSINS
          4755 NEUROTENSIN
                 (NEUROTENSIN OR NEUROTENSINS)
             0 PENETRATINE
             1 PENETRATINES
             1 PENETRATINE
                 (PENETRATINE OR PENETRATINES)
             1 BOMBENSIN
L1       23282 SOMATOSTATIN OR NEUROTENSIN OR PENETRATINE OR BOMBENSIN

=> s acridine or porphyrin or ellipticine or phenantroline or carbazole or
benzimidazole or daunorubicine or epirubicine or mixoxantrone
         17981 ACRIDINE
          1711 ACRIDINES
         18378 ACRIDINE
                 (ACRIDINE OR ACRIDINES)
         35685 PORPHYRIN
         24812 PORPHYRINS
         41961 PORPHYRIN
                 (PORPHYRIN OR PORPHYRINS)
          1033 ELLIPTICINE
           147 ELLIPTICINES
          1057 ELLIPTICINE
                 (ELLIPTICINE OR ELLIPTICINES)
           171 PHENANTROLINE
             5 PHENANTROLINES
           174 PHENANTROLINE
                 (PHENANTROLINE OR PHENANTROLINES)
         16646 CARBAZOLE
```

```
          2183 CARBAZOLES
         17214 CARBAZOLE
                 (CARBAZOLE OR CARBAZOLES)
         23371 BENZIMIDAZOLE
          5898 BENZIMIDAZOLES
         24718 BENZIMIDAZOLE
                 (BENZIMIDAZOLE OR BENZIMIDAZOLES)
            42 DAUNORUBICINE
            16 EPIRUBICINE
             0 MIXOXANTRONE
L2      102010 ACRIDINE OR PORPHYRIN OR ELLIPTICINE OR PHENANTROLINE OR CARBAZO
               LE OR BENZIMIDAZOLE OR DAUNORUBICINE OR EPIRUBICINE OR MIXOXANTR
               ONE

=> s l2 and l2
L3      102010 L2 AND L2

=> s l2 and l1
L4          53 L2 AND L1

=> s conjugat? or coupl? or link? or combin?
        225632 CONJUGAT?
        783227 COUPL?
        466608 LINK?
       1115681 COMBIN?
L5     2438342 CONJUGAT? OR COUPL? OR LINK? OR COMBIN?

=> s l5 and l4
L6          29 L5 AND L4

=> s l6 not py>1999
       7078308 PY>1999
L7           1 L6 NOT PY>1999

=> d ibib

L7   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        1989:625888  CAPLUS
DOCUMENT NUMBER:         111:225888
TITLE:                   Enprostil reduces the increase of gastric corpus
                         mucosal mass induced by the hydrogen-potassium-
                         stimulated adenosine triphosphatase inhibitor BY
                         831-78 in the rat
AUTHOR(S):               Inauen, W.; Rohner, C.; Koelz, H. R.; Herdmann, J.;
                         Schuerer-Maly, C. C.; Varga, L.; Halter, F.
CORPORATE SOURCE:        Gastrointest. Unit, Univ. Hosp., Bern, 3010, Switz.
SOURCE:                  Gastroenterology (1989), 97(4), 846-52
                         CODEN: GASTAB; ISSN: 0016-5085
DOCUMENT TYPE:           Journal
LANGUAGE:                English


=> d abs kwic

L7   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
AB   It was determined if enprostil, a synthetic PGE2 derivative, might inhibit
gastrin
     release and the trophic effects on gastric oxyntic mucosa induced by
     prolonged treatment with an inhibitor of H+-K+-stimulated ATPase, the
     substituted benzimidazole BY 831-78.  Rats were treated
     intragastrically with enprostil (1 or 15 μg/kg b.i.d.), BY 831-78 (15
     μmol/kg once daily), the  combination of enprostil and BY
```

831-78, ranitidine (300 μmol/kg b.i.d.), and placebo. Plasma gastrin and somatostatin levels and gastric acid secretion were measured during a 1-day treatment in animals fitted with chronic gastric fistulas and repeatedly during 9 wk of treatment in intact rats. Despite inhibiting acid secretion, enprostil did not increase plasma gastrin. When combined with BY 831-78, enprostil transiently reduced the BY 831-78-induced increase of integrated plasma gastrin (1375 vs. 2137 pmol/L.12h) in fasted rats with fistulas, but failed to prevent the marked hypergastrinemia following 9 wk of treatment with BY 831-78 (717 vs. 731 pmol/L) in intact rats. However, enprostil reduced the BY 831-78-induced increase of oxyntic mucosal volume (458 vs. 567 mm3), whereas BY 831-78 prevented the enprostil-induced increase of antral mucosal volume (42 vs. 56 mm3). Apparently, some of the trophic effects induced by a H+,K+-ATPase inhibitor are not exclusively governed by gastrin.

AB . . . and the trophic effects on gastric oxyntic mucosa induced by prolonged treatment with an inhibitor of H+-K+-stimulated ATPase, the substituted benzimidazole BY 831-78. Rats were treated intragastrically with enprostil (1 or 15 μg/kg b.i.d.), BY 831-78 (15 μmol/kg once daily), the combination of enprostil and BY 831-78, ranitidine (300 μmol/kg b.i.d.), and placebo. Plasma gastrin and somatostatin levels and gastric acid secretion were measured during a 1-day treatment in animals fitted with chronic gastric fistulas and repeatedly during 9 wk of treatment in intact rats. Despite inhibiting acid secretion, enprostil did not increase plasma gastrin. When combined with BY 831-78, enprostil transiently reduced the BY 831-78-induced increase of integrated plasma gastrin (1375 vs. 2137 pmol/L.12h) in fasted. . .

IT 51110-01-1, Somatostatin
RL: BIOL (Biological study)
(secretion of, ATPase inhibitor and PGE2 analog effect on, gastrin in relation to)

```
=> s l6 not py>2000
       6188416 PY>2000
L8           2 L6 NOT PY>2000

=> s l8 not l7
L9           1 L8 NOT L7

=> d ibib abs kwic

L9   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2000:690483  CAPLUS
DOCUMENT NUMBER:         133:361093
TITLE:                   Ligand-induced internalization of neurotensin
                         in transfected COS-7 cells: differential intracellular
                         trafficking of ligand and receptor
AUTHOR(S):               Vandenbulcke, Franck; Nouel, Dominique; Vincent,
                         Jean-Pierre; Mazella, Jean; Beaudet, Alain
CORPORATE SOURCE:        Montreal Neurological Institute, McGill University,
                         Montreal, QC, H2A 2B4, Can.
SOURCE:                  Journal of Cell Science (2000), 113(17), 2963-2975
                         CODEN: JNCSAI; ISSN: 0021-9533
PUBLISHER:               Company of Biologists Ltd.
DOCUMENT TYPE:           Journal
LANGUAGE:                English
```

AB The neuropeptide neurotensin (NT) is known to be internalized in a receptor-mediated fashion into its target cells. To gain insight into the mechanisms underlying this process, we monitored in parallel the migration of the NT1 neurotensin receptor subtype and a fluorescent analog of NT (fluo-NT) in COS-7 cells transfected with a

tagged NT1 construct. Fluo-NT internalization was prevented by hypertonic sucrose, potassium depletion and cytosol acidification, demonstrating that it proceeded via clathrin-coated pits. Within 0-30 min, fluo-NT accumulated together with its receptor in Acridine Orange-pos., acidic organelles. These organelles concentrated transferrin and immunostained pos. for rab 5A, therefore they were early endosomes. After 30-45 min, the ligand and its receptor no longer colocalized. Fluo-NT was first found in rab 7-pos. late endosomes and later in a nonacidic juxtanuclear compartment identified as the Trans-Golgi Network (TGN) by virtue of its staining for syntaxin 6. This juxtanuclear compartment also stained pos. for rab 7 and for the TGN/pericentriolar recycling endosome marker rab 11, suggesting that the ligand could have been recruited to the TGN from either late or recycling endosomes. By that time, internalized receptors were detected in Lamp-1-immunoreactive lysosomes. These results demonstrate that neurotensin/NT1 receptor complexes follow a recycling cycle that is unique among the G protein-coupled receptors studied to date, and provide the first evidence for the targeting of a nonendogenous protein from endosomes to the TGN.

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Ligand-induced internalization of neurotensin in transfected COS-7 cells: differential intracellular trafficking of ligand and receptor

AB The neuropeptide neurotensin (NT) is known to be internalized in a receptor-mediated fashion into its target cells. To gain insight into the mechanisms underlying this process, we monitored in parallel the migration of the NT1 neurotensin receptor subtype and a fluorescent analog of NT (fluo-NT) in COS-7 cells transfected with a tagged NT1 construct. Fluo-NT internalization was prevented by hypertonic sucrose, potassium depletion and cytosol acidification, demonstrating that it proceeded via clathrin-coated pits. Within 0-30 min, fluo-NT accumulated together with its receptor in Acridine Orange-pos., acidic organelles. These organelles concentrated transferrin and immunostained pos. for rab 5A, therefore they were early endosomes. After 30-45 min, the ligand and its receptor no longer colocalized. Fluo-NT was first found in rab 7-pos. late endosomes and later in a nonacidic juxtanuclear compartment identified as the Trans-Golgi Network (TGN) by virtue of its staining for syntaxin 6. This juxtanuclear compartment also stained pos. for rab 7 and for the TGN/pericentriolar recycling endosome marker rab 11, suggesting that the ligand could have been recruited to the TGN from either late or recycling endosomes. By that time, internalized receptors were detected in Lamp-1-immunoreactive lysosomes. These results demonstrate that neurotensin/NT1 receptor complexes follow a recycling cycle that is unique among the G protein-coupled receptors studied to date, and provide the first evidence for the targeting of a nonendogenous protein from endosomes to the TGN.

ST neurotensin complex NT1 receptor endocytosis intracellular trafficking

IT Organelle
(coated pit; neurotensin internalization via NT1 receptors proceeds via clathrin-coated pits)

IT Endosome
(internalized neurotensin/NT1 receptor complexes are initially targeted to endosomes upon import)

IT Biological transport
(intracellular; neurotensin internalized via NT1 receptors is recruited to trans-golgi network whereas receptors are targeted to lysosomes for degradation)

IT Lysosome
(neurotensin internalized via NT1 receptors is recruited to trans-golgi network whereas receptors are targeted to lysosomes for degradation)

IT Neurotensin receptors

RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(neurotensin internalized via NT1 receptors is recruited to trans-golgi network whereas receptors are targeted to lysosomes for degradation)
IT Endocytosis
(receptor-mediated; neurotensin internalization via NT1 receptors proceeds via clathrin-coated pits)
IT Organelle
(trans-Golgi network; neurotensin internalized via NT1 receptors is recruited to trans-golgi network whereas receptors are targeted to lysosomes for degradation)
IT 39379-15-2, Neurotensin
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(neurotensin internalized via NT1 receptors is recruited to trans-golgi network whereas receptors are targeted to lysosomes for degradation)

=>

---Logging off of STN---

=>
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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 NEWS  2          "Ask CAS" for self-help around the clock
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 NEWS 17  AUG 30  CA(SM)/CAplus(SM) Austrian patent law changes

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

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FILE COVERS 1907 - 11 Sep 2006 VOL 145 ISS 12
FILE LAST UPDATED: 10 Sep 2006 (20060910/ED)

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=> s us 20050019254/pn
L1   1 US 20050019254/PN
                (US2005019254/PN)

=> sel rn
E1 THROUGH E39 ASSIGNED

=> file reg
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                         ENTRY   SESSION
FULL ESTIMATED COST   2.49   2.70

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DICTIONARY FILE UPDATES: 10 SEP 2006 HIGHEST RN 906318-57-8

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experimental property data in the original document. For information
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http://www.cas.org/ONLINE/UG/regprops.html

=> s e1-e39
             1 1001-53-2/BI
                (1001-53-2/RN)
             1 105-36-2/BI
                (105-36-2/RN)
             1 111-40-0/BI
                (111-40-0/RN)
             1 112-24-3/BI
                (112-24-3/RN)
             1 12678-01-2/BI
                (12678-01-2/RN)
             1 14133-76-7/BI
                (14133-76-7/RN)
             1 14378-26-8/BI
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             1 14998-63-1/BI

(14998-63-1/RN)
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1 20830-81-3/BI
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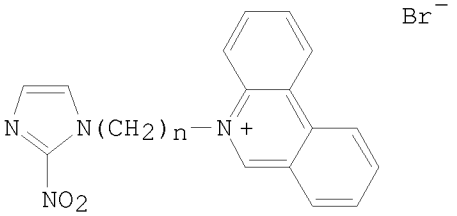
1 91-63-4/BI
(91-63-4/RN)
1 98-88-4/BI

(98-88-4/RN)
L2 39 (1001-53-2/BI OR 105-36-2/BI OR 111-40-0/BI OR 112-24-3/BI OR 12678-01-2/BI OR 14133-76-7/BI OR 14378-26-8/BI OR 14998-63-1/BI OR 193206-49-4/BI OR 20830-81-3/BI OR 24424-99-5/BI OR 25908-22-9/BI OR 260-94-6/BI OR 26455-95-8/BI OR 289661-18-3/BI OR 289661-19-4/BI OR 289661-20-7/BI OR 289661-21-8/BI OR 289661-22-9/BI OR 289661-23-0/BI OR 289661-24-1/BI OR 289661-25-2/BI OR 289661-26-3/BI OR 289661-27-4/BI OR 289661-28-5/BI OR 289661-29-6/BI OR 289705-40-4/BI OR 289705-41-5/BI OR 51-17-2/BI OR 519-23-3/BI OR 5470-96-2/BI OR 56420-45-2/BI OR 59065-50-8/BI OR 65271-80-9/BI OR 7439-96-5/BI OR 85-02-9/BI OR 86-74-8/BI OR 91-63-4/BI OR 98-88-4/BI)

=> d 1-39

L2 ANSWER 1 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 289705-41-5 REGISTRY
ED Entered STN: 20 Sep 2000
CN Rhenium, aqua(benzo[f]quinoline-3-carboxylato-κN4,κO3)tricarbonyl-, (OC-6-44)- (9CI) (CA INDEX NAME)
MF C17 H10 N O6 Re
CI CCS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



I

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 289705-40-4 REGISTRY
ED Entered STN: 20 Sep 2000
CN Ethanaminium, N,N,N-triethyl-, (OC-6-44)-(benzo[f]quinoline-3-carboxylato-κN4,κO3)bromotricarbonylrhenate(1-) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Rhenate(1-), (benzo[f]quinoline-3-carboxylato-κN4,κO3)bromotricarbonyl-, (OC-6-44)-, N,N,N-triethylethanaminium (9CI)
MF C17 H8 Br N O5 Re . C8 H20 N
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CM 1

CRN 289705-39-1
CMF C17 H8 Br N O5 Re
CCI CCS

/ Structure 2 in file .gra /

CM 2

CRN 66-40-0
CMF C8 H20 N

/ Structure 3 in file .gra /

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 289661-29-6 REGISTRY
ED Entered STN: 19 Sep 2000
CN Glycine, N-[2-(formylamino)ethyl]-N-(2-pyridinylmethyl)- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C11 H15 N3 O3
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 4 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 289661-28-5 REGISTRY
ED Entered STN: 19 Sep 2000
CN 1,2-Ethanediamine, N-(2-aminoethyl)-N'-(2-quinolinylmethyl)-, hydrochloride (9CI) (CA INDEX NAME)
MF C14 H20 N4 . x Cl H
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (289661-24-1)

/ Structure 5 in file .gra /

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 289661-27-4 REGISTRY
ED Entered STN: 19 Sep 2000
CN 1,2-Ethanediamine, N-(2-quinolinylmethyl)-, hydrochloride (9CI) (CA INDEX NAME)
MF C12 H15 N3 . x Cl H
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (289661-21-8)

/ Structure 6 in file .gra /

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2   ANSWER 6 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   289661-26-3 REGISTRY
ED   Entered STN: 19 Sep 2000
CN   Glycine, N-(2-aminoethyl)-N-(2-pyridinylmethyl)- (9CI) (CA INDEX NAME)
FS   3D CONCORD
MF   C10 H15 N3 O2
SR   CA
LC   STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 7 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2   ANSWER 7 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   289661-25-2 REGISTRY
ED   Entered STN: 19 Sep 2000
CN   Glycine, N-[2-(formylamino)ethyl]-N-(2-pyridinylmethyl)-, ethyl ester
     (9CI) (CA INDEX NAME)
FS   3D CONCORD
MF   C13 H19 N3 O3
SR   CA
LC   STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 8 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2   ANSWER 8 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   289661-24-1 REGISTRY
ED   Entered STN: 19 Sep 2000
CN   1,2-Ethanediamine, N-(2-aminoethyl)-N'-(2-quinolinylmethyl)- (9CI) (CA
     INDEX NAME)
FS   3D CONCORD
MF   C14 H20 N4
CI   COM
SR   CA
LC   STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 9 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2   ANSWER 9 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   289661-23-0 REGISTRY
ED   Entered STN: 19 Sep 2000
CN   Carbamic acid, [2-[[2-[(2-quinolinylmethyl)amino]ethyl]amino]ethyl]-,
     1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

FS   3D CONCORD
MF   C19 H28 N4 O2
SR   CA
LC   STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 10 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2   ANSWER 10 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   289661-22-9 REGISTRY
ED   Entered STN: 19 Sep 2000
CN   Carbamic acid, [2-[[2-[(2-quinolinylmethylene)amino]ethyl]amino]ethyl]-,
     1,1-dimethylethyl ester (9CI) (CA INDEX NAME)
FS   3D CONCORD
MF   C19 H26 N4 O2
SR   CA
LC   STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 11 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

               1 REFERENCES IN FILE CA (1907 TO DATE)
               1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2   ANSWER 11 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   289661-21-8 REGISTRY
ED   Entered STN: 19 Sep 2000
CN   1,2-Ethanediamine, N-(2-quinolinylmethyl)- (9CI) (CA INDEX NAME)
FS   3D CONCORD
MF   C12 H15 N3
CI   COM
SR   CA
LC   STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 12 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

               2 REFERENCES IN FILE CA (1907 TO DATE)
               2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2   ANSWER 12 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   289661-20-7 REGISTRY
ED   Entered STN: 19 Sep 2000
CN   Acetamide, N-[2-[(2-quinolinylmethyl)amino]ethyl]- (9CI) (CA INDEX NAME)
FS   3D CONCORD
MF   C14 H17 N3 O
SR   CA
LC   STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 13 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 13 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 289661-19-4 REGISTRY
ED Entered STN: 19 Sep 2000
CN Acetamide, N-[2-[(2-quinolinylmethylene)amino]ethyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C14 H15 N3 O
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

/ Structure 14 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 14 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 289661-18-3 REGISTRY
ED Entered STN: 19 Sep 2000
CN Benzo[f]quinoline-3-carboxylic acid, hydrobromide (9CI) (CA INDEX NAME)
MF C14 H9 N O2 . Br H
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (65714-31-0)

/ Structure 15 in file .gra /

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 15 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 193206-49-4 REGISTRY
ED Entered STN: 28 Aug 1997
CN Carbamic acid, [2-[(2-aminoethyl)amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C9 H21 N3 O2
CI COM
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, TOXCENTER, USPATFULL

/ Structure 16 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

7 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 16 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 65271-80-9 REGISTRY
ED Entered STN: 16 Nov 1984
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-
    hydroxyethyl)amino]ethyl]amino]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1,4-Bis[(2-(2-hydroxyethylamino)ethyl)amino]-5,8-dihydroxyanthraquinone
CN 1,4-Dihydroxy-5,8-bis-[[2-[(2-hydroxyethyl)amino]ethyl]amino]anthraquinone
CN 1,4-Dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-
    anthracenedione
CN DHAQ
CN Dihydroxyanthraquinone
CN Mitoxanthrone
CN Mitoxantrone
CN Mitozantrone
CN Novantron
CN Novantrone
CN NSC 279836
CN Ralenova
FS 3D CONCORD
DR 137635-96-2, 70945-62-9
MF C22 H28 N4 O6
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS,
      BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSCHEM,
      CSNB, DDFU, DRUGU, EMBASE, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA,
      MEDLINE, MRCK*, PHAR, PROMT, PROUSDDR, PS, RTECS*, SCISEARCH, SYNTHLINE,
      TOXCENTER, ULIDAT, USAN, USPAT2, USPATFULL, VETU
        (*File contains numerically searchable property data)
    Other Sources: WHO

/ Structure 17 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

          2976 REFERENCES IN FILE CA (1907 TO DATE)
           104 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          2985 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 17 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 59065-50-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN Formamide, N-[2-[(2-pyridinylmethyl)amino]ethyl]- (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF C9 H13 N3 O
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL

/ Structure 18 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

             2 REFERENCES IN FILE CA (1907 TO DATE)
             2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 18 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 56420-45-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN 5,12-Naphthacenedione, 10-[(3-amino-2,3,6-trideoxy-α-L-arabino-

hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (8S,10S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,12-Naphthacenedione, 10-[(3-amino-2,3,6-trideoxy-α-L-arabino-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (8S-cis)-
OTHER NAMES:
CN 4'-epi-Adriamycin
CN 4'-epi-Doxorubicin
CN 4'-Epi-DX
CN 4'-Epiadriamycin
CN 4'-Epidoxorubicin
CN Epiadriamycin
CN Epidoxorubicin
CN Epirubicin
CN Farmarubicin
CN Farmarubicine
CN IMI 28
CN NSC 256942
CN Pharmarubicin
CN Pidorubicin
CN WP 697
FS STEREOSEARCH
DR 57918-25-9
MF C27 H29 N O11
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAPLUS, CBNB, CHEMCATS, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IMSCOSEARCH, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK*, NAPRALERT, PHAR, PROMT, PROUSDDR, PS, RTECS*, SCISEARCH, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: WHO

Absolute stereochemistry.

/ Structure 19 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2331 REFERENCES IN FILE CA (1907 TO DATE)
93 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2336 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 19 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 26455-95-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN Benzo[f]quinoline-3-carbonitrile, 4-benzoyl-3,4-dihydro- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1-Benzoyl-1,2-dihydrobenzo[f]quinaldonitrile
CN NSC 96541
FS 3D CONCORD
MF C21 H14 N2 O
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

/ Structure 20 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8 REFERENCES IN FILE CA (1907 TO DATE)
8 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 20 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 25908-22-9 REGISTRY
ED Entered STN: 16 Nov 1984
CN Ethanaminium, N,N,N-triethyl-, (OC-6-22)-tribromotricarbonylrhenate(2-) (2:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Ammonium, tetraethyl-, tribromotricarbonylrhenate(2-) (2:1), cis- (8CI)
CN Rhenate(2-), tribromotricarbonyl-, (OC-6-22)-, bis(N,N,N-triethylethanaminium) (9CI)
CN Rhenate(2-), tribromotricarbonyl-, bis(tetraethylammonium), cis- (8CI)
OTHER NAMES:
CN Bis(tetraethylammonium) fac-tribromotricarbonylrhenate
CN Bis(tetraethylammonium) fac-tribromotricarbonylrhenate(2-)
CN Bis(tetraethylammonium) tribromotricarbonylrhenate(2-)
CN fac-Bis(tetraethylammonium) tribromotricarbonylrhenate(2-)
MF C8 H20 N . 1/2 C3 Br3 O3 Re
LC STN Files: CA, CAPLUS, CASREACT, GMELIN*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

CM 1

CRN 44863-71-0
CMF C3 Br3 O3 Re
CCI CCS

/ Structure 21 in file .gra /

CM 2

CRN 66-40-0
CMF C8 H20 N

/ Structure 22 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

125 REFERENCES IN FILE CA (1907 TO DATE)
125 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 21 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 24424-99-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN Dicarbonic acid, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Formic acid, oxydi-, di-tert-butyl ester (7CI, 8CI)
OTHER NAMES:
CN Bis(1,1-dimethylethyl) dicarbonate
CN Bis(tert-butyl) dicarbonate
CN BOC-anhydride
CN Di-tert-butyl dicarbonate
CN Di-tert-butyl oxydiformate
CN Di-tert-butyl pyrocarbonate

CN Pyrocarbonic acid di-tert-butyl ester
CN tert-Butoxycarbonyl anhydride
CN tert-Butyl dicarbonate
FS 3D CONCORD
MF C10 H18 O5
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CBNB,
      CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, GMELIN*, IPA, MEDLINE,
      MSDS-OHS, PROMT, PS, RTECS*, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
        (*File contains numerically searchable property data)
    Other Sources: DSL**, EINECS**, TSCA**
        (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 23 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

          4922 REFERENCES IN FILE CA (1907 TO DATE)
           155 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          4941 REFERENCES IN FILE CAPLUS (1907 TO DATE)
             1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 22 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 20830-81-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN 5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-α-L-lyxo-
    hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-,
    (8S,10S)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy-α-L-lyxo-
    hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-,
    (8S-cis)-
CN Daunomycin (8CI)
OTHER NAMES:
CN (+)-Daunomycin
CN Acetyladriamycin
CN Cerubidin
CN Daunoblastina
CN Daunomycine
CN Daunorubicin
CN Daunorubicine
CN DaunoXome
CN Leukaemomycin C
CN NSC 82151
CN NSC 83142
CN RP 13057
CN Rubidomycin
CN Rubomycin C
FS STEREOSEARCH
DR 11006-54-5, 11048-29-6, 1407-15-4, 23942-76-9, 149541-57-1, 27576-81-4,
    28020-80-6
MF C27 H29 N O10
CI COM
LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS,
      BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX,
      CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT,
      IFIUDB, IMSCOSEARCH, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PHAR,
      PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USAN, USPAT2,
      USPATFULL
        (*File contains numerically searchable property data)

Other Sources: EINECS**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.

/ Structure 24 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6301 REFERENCES IN FILE CA (1907 TO DATE)
667 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6308 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 23 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 14998-63-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN Rhenium, isotope of mass 186 (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 186Re
CN Re 186
CN Re-186
CN Rhenium-186
MF Re
CI COM
LC STN Files: ADISNEWS, ANABSTR, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CBNB, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

/ Structure 25 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1121 REFERENCES IN FILE CA (1907 TO DATE)
402 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1123 REFERENCES IN FILE CAPLUS (1907 TO DATE)
6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 24 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 14378-26-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN Rhenium, isotope of mass 188 (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 188Re
CN Re 188
CN Rhenium-188
MF Re
CI COM
SR CA
LC STN Files: AGRICOLA, ANABSTR, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CBNB, CIN, IPA, PROMT, TOXCENTER, USPAT2, USPATFULL

/ Structure 26 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1216 REFERENCES IN FILE CA (1907 TO DATE)
477 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

```
            1218 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 25 OF 39  REGISTRY  COPYRIGHT 2006 ACS on STN
RN   14133-76-7  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   Technetium, isotope of mass 99 (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   99Tc
CN   Tc 99
CN   Technetium-99
MF   Tc
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CAOLD,
       CAPLUS, CASREACT, CBNB, CHEMLIST, CIN, CSNB, EMBASE, IFICDB, IFIPAT,
       IFIUDB, IPA, MSDS-OHS, PROMT, TOXCENTER, USPAT2, USPATFULL


/ Structure 27 in file .gra /


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

            9189 REFERENCES IN FILE CA (1907 TO DATE)
            3642 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            9196 REFERENCES IN FILE CAPLUS (1907 TO DATE)
              27 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 26 OF 39  REGISTRY  COPYRIGHT 2006 ACS on STN
RN   12678-01-2  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   Phenanthroline (7CI, 9CI)  (CA INDEX NAME)
MF   C12 H8 N2
CI   COM, MAN
LC   STN Files:   AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS,
       CASREACT, CIN, DETHERM*, EMBASE, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT,
       TOXCENTER, TULSA, USPAT2, USPATFULL
         (*File contains numerically searchable property data)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
             265 REFERENCES IN FILE CA (1907 TO DATE)
              84 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             267 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 27 OF 39  REGISTRY  COPYRIGHT 2006 ACS on STN
RN   7439-96-5  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   Manganese (8CI, 9CI)  (CA INDEX NAME)
OTHER NAMES:
CN   Colloidal manganese
CN   Cutaval
CN   JIS-G 1213
CN   Manganese element
CN   Manganese fulleride (MnC20)
CN   Manganese-55
DR   8031-40-1, 8075-39-6, 17375-02-9, 39303-06-5, 195161-78-5
MF   Mn
CI   COM
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOSIS, BIOTECHNO, CA,
       CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CHEMSAFE, CIN,
       CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
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ENCOMPPAT, ENCOMPPAT2, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
MRCK*, MSDS-OHS, PIRA, PROMT, RTECS*, TOXCENTER, TULSA, ULIDAT, USPAT2,
USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 28 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

182431 REFERENCES IN FILE CA (1907 TO DATE)
9241 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
182655 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 28 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 5470-96-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2-Quinolinecarboxaldehyde (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Quinaldaldehyde (6CI, 7CI, 8CI)
OTHER NAMES:
CN 2-Formylquinoline
CN 2-Quinolinecarbaldehyde
CN 2-Quinolylaldehyde
CN 2-Quinolylcarbaldehyde
CN NSC 27026
FS 3D CONCORD
MF C10 H7 N O
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CSCHEM, GMELIN*, IFICDB, IFIPAT, IFIUDB, PS,
SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 29 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

449 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
451 REFERENCES IN FILE CAPLUS (1907 TO DATE)
29 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 29 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 1001-53-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Acetamide, N-(2-aminoethyl)- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN 1,2-Ethanediamine, N-acetyl-
CN 2-(Acetylamino)ethylamine
CN 2-Acetamido-1-ethanamine
CN 2-Acetamidoethylamine
CN N-(2-Aminoethyl)acetamide
CN N-Acetyl-1,2-diaminoethane

CN   N-Acetyl-1,2-ethanediamine
CN   N-Acetyl-1,2-ethylenediamine
CN   N-Acetylethylenediamine
CN   N-Monoacetylethylenediamine
CN   N1-Acetylethylenediamine
CN   NSC 28936
FS   3D CONCORD
MF   C4 H10 N2 O
CI   COM
LC   STN Files: BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, IPA, SYNTHLINE,
       TOXCENTER, USPAT2, USPATFULL
         (*File contains numerically searchable property data)

/ Structure 30 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

             403 REFERENCES IN FILE CA (1907 TO DATE)
              10 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             404 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               7 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 30 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   519-23-3 REGISTRY
ED   Entered STN: 16 Nov 1984
CN   6H-Pyrido[4,3-b]carbazole, 5,11-dimethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Ellipticine (6CI)
OTHER NAMES:
CN   5,11-Dimethyl-6H-pyrido[4,3-b]carbazole
CN   CP 5
CN   NSC 71795
FS   3D CONCORD
MF   C17 H14 N2
CI   COM
LC   STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD,
       CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, DDFU, DRUGU,
       EMBASE, IPA, MEDLINE, MRCK*, NAPRALERT, PROMT, RTECS*, SPECINFO,
       TOXCENTER, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources: EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 31 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

             652 REFERENCES IN FILE CA (1907 TO DATE)
             138 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             653 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 31 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   260-94-6 REGISTRY
ED   Entered STN: 16 Nov 1984
CN   Acridine (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:

CN 10-Azaanthracene
CN 2,3-Benzoquinoline
CN 9-Azaanthracene
CN Benzo[b]quinoline
CN Dibenzo[b,e]pyridine
CN NSC 3408
FS 3D CONCORD
MF C13 H9 N
CI COM, RPS
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS,
      BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX,
      CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT,
      ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT,
      IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, PIRA, PROMT, RTECS*, SPECINFO,
      TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VETU, VTB
        (*File contains numerically searchable property data)
    Other Sources: EINECS**, NDSL**, TSCA**
        (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 32 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

          4531 REFERENCES IN FILE CA (1907 TO DATE)
           625 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
          4538 REFERENCES IN FILE CAPLUS (1907 TO DATE)
             5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 32 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 112-24-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN 1,2-Ethanediamine, N,N'-bis(2-aminoethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Triethylenetetramine (8CI)
OTHER NAMES:
CN 1,4,7,10-Tetraazadecane
CN 1,8-Diamino-3,6-diazaoctane
CN 3,6-Diazaoctane-1,8-diamine
CN Ancamine TETA
CN Araldite Hardener HY 951
CN Araldite HY 951
CN DEH 24
CN Epicure 3234
CN HY 951
CN N,N'-Bis(2-aminoethyl)-1,2-diaminoethane
CN N,N'-Bis(2-aminoethyl)-1,2-ethanediamine
CN N,N'-Bis(2-aminoethyl)ethylenediamine
CN NSC 443
CN RT 1AX
CN Rutapox VE 2896
CN TECZA
CN TETA
CN TETA (crosslinking agent)
CN Trien
CN Trientine
CN VE 2896
CN Z1
FS 3D CONCORD
DR 801997-18-2, 14175-14-5, 105093-20-7, 71124-11-3, 39421-77-7, 110670-33-2,
    193487-08-0

MF   C6 H18 N4
CI   COM
LC   STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*,
       BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*,
       DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*,
       HSDB*, IFICDB, IFIPAT, IFIUDB, IMSDRUGNEWS, IMSRESEARCH, IPA, MEDLINE,
       MRCK*, MSDS-OHS, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE,
       TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
         (*File contains numerically searchable property data)
     Other Sources: DSL**, EINECS**, TSCA**, WHO
         (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 33 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

            5943 REFERENCES IN FILE CA (1907 TO DATE)
            1697 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            5949 REFERENCES IN FILE CAPLUS (1907 TO DATE)
             114 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 33 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   111-40-0 REGISTRY
ED   Entered STN: 16 Nov 1984
CN   1,2-Ethanediamine, N-(2-aminoethyl)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Diethylenetriamine (8CI)
OTHER NAMES:
CN   1,4,7-Triazaheptane
CN   1,5-Diamino-3-azapentane
CN   2,2'-Diaminodiethylamine
CN   2,2'-Iminobis(ethanamine)
CN   2-(2-Aminoethylamino)ethylamine
CN   3-Azapentane-1,5-diamine
CN   Ancamine DETA
CN   Bis(β-aminoethyl)amine
CN   Bis(2-aminoethyl)amine
CN   ChS-P 1
CN   DEH 20
CN   DETA
CN   Epicure T
CN   Epon 3223
CN   H 9506
CN   N,N-Bis(2-aminoethyl)amine
CN   N-(2-Aminoethyl)-1,2-ethanediamine
CN   N-(2-Aminoethyl)ethylenediamine
CN   NCI 138881
CN   NSC 446
FS   3D CONCORD
DR   859039-00-2, 8076-55-9, 53303-76-7, 54018-92-7, 59135-90-9, 94700-17-1,
     98824-35-2, 73989-30-7, 26915-78-6, 419553-44-9
MF   C4 H13 N3
CI   COM
LC   STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA,
       CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST,
       CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT,
       ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT,
       IFIUDB, IPA, MEDLINE, MSDS-OHS, PIRA, PROMT, RTECS*, SPECINFO,
       SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB

(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 34 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9243 REFERENCES IN FILE CA (1907 TO DATE)
3097 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9256 REFERENCES IN FILE CAPLUS (1907 TO DATE)
168 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 34 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 105-36-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Acetic acid, bromo-, ethyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (Ethoxycarbonyl)methyl bromide
CN α-Bromoacetic acid ethyl ester
CN 2-Bromoacetic acid ethyl ester
CN Antol
CN Bromoacetic acid ethyl ester
CN Ethyl α-bromoacetate
CN Ethyl 2-bromoacetate
CN Ethyl 2-bromoethanoate
CN Ethyl bromacetate
CN Ethyl bromoacetate
CN Ethyl bromoethanoate
CN Ethyl monobromoacetate
CN NSC 8832
FS 3D CONCORD
DR 679806-14-5
MF C4 H7 Br O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, CSNB, DETHERM*, EMBASE, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 35 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

8356 REFERENCES IN FILE CA (1907 TO DATE)
27 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
8370 REFERENCES IN FILE CAPLUS (1907 TO DATE)
43 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 35 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN 98-88-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Benzoyl chloride (8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:

CN   Benzaldehyde, α-chloro-
CN   Benzenecarbonyl chloride
CN   Benzoic acid chloride
FS   3D CONCORD
MF   C7 H5 Cl O
CI   COM
LC   STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, CA, CAOLD,
       CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN,
       CSCHEM, CSNB, DETHERM*, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT,
       ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*,
       MSDS-OHS, PIRA, PROMT, PS, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER,
       ULIDAT, USPAT2, USPATFULL, VTB
         (*File contains numerically searchable property data)
     Other Sources: DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 36 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

           15950 REFERENCES IN FILE CA (1907 TO DATE)
             407 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
           15992 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               8 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 36 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   91-63-4 REGISTRY
ED   Entered STN: 16 Nov 1984
CN   Quinoline, 2-methyl- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Quinaldine (8CI)
OTHER NAMES:
CN   2-Methylquinoline
CN   Khinaldin
CN   NSC 3397
FS   3D CONCORD
MF   C10 H9 N
CI   COM
LC   STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA,
       CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM,
       CSNB, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB,
       MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PROMT, RTECS*, SPECINFO, SYNTHLINE,
       TOXCENTER, ULIDAT, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources: DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 37 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

            1992 REFERENCES IN FILE CA (1907 TO DATE)
              53 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            1992 REFERENCES IN FILE CAPLUS (1907 TO DATE)
              15 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 37 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   86-74-8 REGISTRY

ED   Entered STN: 16 Nov 1984
CN   9H-Carbazole (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Carbazole (8CI)
OTHER NAMES:
CN   9-Azafluorene
CN   Chlorophenesin carbamate
CN   Dibenzopyrrole
CN   Dibenzo[b,d]pyrrole
CN   Diphenylenimine
CN   NSC 3498
CN   SKF 20091
FS   3D CONCORD
MF   C12 H9 N
CI   COM
LC   STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA,
       CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN,
       CSCHEM, CSNB, DDFU, DETHERM*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2,
       ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA,
       MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, PIRA, PROMT, RTECS*, SPECINFO,
       SYNTHLINE, TOXCENTER, TULSA, ULIDAT, USPAT2, USPATFULL, VTB
         (*File contains numerically searchable property data)
     Other Sources: DSL**, EINECS**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 38 in file .gra /

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

            5803 REFERENCES IN FILE CA (1907 TO DATE)
             609 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            5816 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 38 OF 39 REGISTRY COPYRIGHT 2006 ACS on STN
RN   85-02-9 REGISTRY
ED   Entered STN: 16 Nov 1984
CN   Benzo[f]quinoline (6CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN   β-Naphthoquinoline
CN   1-Azaphenanthrene
CN   5,6-Benzoquinoline
CN   5,6-Benzo[f]quinoline
CN   NSC 9850
FS   3D CONCORD
DR   76713-23-0
MF   C13 H9 N
CI   COM, RPS
LC   STN Files: ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS,
       CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CSCHEM, CSNB, DETHERM*,
       EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, RTECS*,
       SPECINFO, TOXCENTER, USPATFULL
         (*File contains numerically searchable property data)
     Other Sources: EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)

/ Structure 39 in file .gra /

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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

             899 REFERENCES IN FILE CA (1907 TO DATE)
              49 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             899 REFERENCES IN FILE CAPLUS (1907 TO DATE)
              51 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2   ANSWER 39 OF 39  REGISTRY  COPYRIGHT 2006 ACS on STN
RN   51-17-2  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   1H-Benzimidazole (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   Benzimidazole (6CI, 8CI)
OTHER NAMES:
CN   1,3-Benzodiazole
CN   1,3-Diazaindene
CN   3-Azaindole
CN   Azindole
CN   Benziminazole
CN   Benzoglyoxaline
CN   Benzoimidazole
CN   BZI
CN   N,N'-Methenyl-o-phenylenediamine
CN   NSC 759
CN   o-Benzimidazole
FS   3D CONCORD
DR   25463-25-6, 79351-71-6, 116421-27-3
MF   C7 H6 N2
CI   COM, RPS
LC   STN Files:   ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS,
       BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE,
       GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
       NAPRALERT, PIRA, PROMT, RTECS*, SPECINFO, SYNTHLINE, TOXCENTER, ULIDAT,
       USPAT2, USPATFULL, VETU, VTB
         (*File contains numerically searchable property data)
     Other Sources:   EINECS**, NDSL**, TSCA**
         (**Enter CHEMLIST File for up-to-date regulatory information)


/ Structure 40 in file .gra /


**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

            6333 REFERENCES IN FILE CA (1907 TO DATE)
            1941 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            6341 REFERENCES IN FILE CAPLUS (1907 TO DATE)
              11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)


=> s 289705-41-5/rn or 289705-40-4/rn
             1 289705-41-5/RN
             1 289705-40-4/RN
L3           2 289705-41-5/RN OR 289705-40-4/RN

=> file caplus
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                  76.30      79.00
```

FILE 'CAPLUS' ENTERED AT 08:44:25 ON 11 SEP 2006
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FILE COVERS 1907 - 11 Sep 2006 VOL 145 ISS 12
FILE LAST UPDATED: 10 Sep 2006 (20060910/ED)

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They are available for your review at:

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```
=> s 289705-41-5/rn or 289705-40-4/rn
             1 289705-41-5
             0 289705-41-5D
             1 289705-41-5/RN
                 (289705-41-5 (NOTL) 289705-41-5D )
             1 289705-40-4
             0 289705-40-4D
             1 289705-40-4/RN
                 (289705-40-4 (NOTL) 289705-40-4D )
L4           1 289705-41-5/RN OR 289705-40-4/RN

=> d ibib

L4   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2000:608618  CAPLUS
DOCUMENT NUMBER:         133:204807
TITLE:                   Molecules for the treatment and diagnosis of tumors
INVENTOR(S):             Alberto, Roger Ariel; Schibli, Roger
PATENT ASSIGNEE(S):      Mallinckrodt Inc., USA
SOURCE:                  PCT Int. Appl., 28 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
     WO 2000050086        A1    20000831    WO 2000-EP1553         20000224
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
```

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     CA 2360419           AA    20000831    CA 2000-2360419        20000224
     EP 1154798           A1    20011121    EP 2000-910711         20000224
     EP 1154798           B1    20060510
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, CY
     JP 2002537360        T2    20021105    JP 2000-600696         20000224
     AT 325624            E     20060615    AT 2000-910711         20000224
     US 6844425           B1    20050118    US 2001-913788         20010815
     US 2005019254        A1    20050127    US 2004-707994         20040130
PRIORITY APPLN. INFO.:                      US 1999-121340P     P  19990224
                                            EP 1999-200754      A  19990312
                                            WO 2000-EP1553      W  20000224
                                            US 2001-913788      A1 20010815
REFERENCE COUNT:         10    THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
                               RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT


=>

---Logging off of STN---



=>
Executing the logoff script...


=> LOG Y

COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   9.40      88.40

STN INTERNATIONAL LOGOFF AT 08:44:51 ON 11 SEP 2006



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Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1642BJF

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


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 NEWS  1          Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2          "Ask CAS" for self-help around the clock
 NEWS  3  FEB 27  New STN AnaVist pricing effective March 1, 2006
 NEWS  4  MAY 10  CA/CAplus enhanced with 1900-1906 U.S. patent records
 NEWS  5  MAY 11  KOREAPAT updates resume
 NEWS  6  MAY 19  Derwent World Patents Index to be reloaded and enhanced
 NEWS  7  MAY 30  IPC 8 Rolled-up Core codes added to CA/CAplus and
                  USPATFULL/USPAT2
 NEWS  8  MAY 30  The F-Term thesaurus is now available in CA/CAplus
 NEWS  9  JUN 02  The first reclassification of IPC codes now complete in
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                  INPADOC
 NEWS 10  JUN 26  TULSA/TULSA2 reloaded and enhanced with new search and
                  and display fields
 NEWS 11  JUN 28  Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 12  JUl 11  CHEMSAFE reloaded and enhanced
 NEWS 13  JUl 14  FSTA enhanced with Japanese patents
 NEWS 14  JUl 19  Coverage of Research Disclosure reinstated in DWPI
 NEWS 15  AUG 09  INSPEC enhanced with 1898-1968 archive
 NEWS 16  AUG 28  ADISCTI Reloaded and Enhanced
 NEWS 17  AUG 30  CA(SM)/CAplus(SM) Austrian patent law changes

 NEWS EXPRESS  JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS LOGIN    Welcome Banner and News Items
 NEWS IPC8     For general information regarding STN implementation of IPC 8
 NEWS X25      X.25 communication option no longer available

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* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 08:47:38 ON 11 SEP 2006

=>
Uploading
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Do you want to switch to the Registry File?
Choice (Y/n):
Switching to the Registry File...
Some commands only work in certain files.  For example, the EXPAND
command can only be used to look at the index in a file which has an
index.  Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of
commands which can be used in this file.

=> FILE REGISTRY

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 08:48:06 ON 11 SEP 2006
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STRUCTURE FILE UPDATES:   10 SEP 2006  HIGHEST RN 906318-57-8
DICTIONARY FILE UPDATES:  10 SEP 2006  HIGHEST RN 906318-57-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.
```

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading c:\program files\stnexp\queries\10707994 fig.2

L1   STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1   STR
/ Structure 41 in file .gra /

Structure attributes must be viewed using STN Express query preparation.

=> s l1 exa full
FULL SEARCH INITIATED 08:49:31 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   11 TO ITERATE

100.0% PROCESSED   11 ITERATIONS   1 ANSWERS
SEARCH TIME: 00.00.01

L2   1 SEA EXA FUL L1

=> s l1 sss full
FULL SEARCH INITIATED 08:49:42 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   240 TO ITERATE

100.0% PROCESSED   240 ITERATIONS   21 ANSWERS
SEARCH TIME: 00.00.01

L3   21 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                         ENTRY   SESSION
FULL ESTIMATED COST   223.92   224.13

FILE 'CAPLUS' ENTERED AT 08:49:49 ON 11 SEP 2006
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FILE COVERS 1907 - 11 Sep 2006 VOL 145 ISS 12
FILE LAST UPDATED: 10 Sep 2006 (20060910/ED)

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http://www.cas.org/infopolicy.html

```
=> s l3
L4          29 L3

=> s l3/thu
            29 L3
        809336 THU/RL
L5           0 L3/THU
                 (L3 (L) THU/RL)

=> s l3/dgn
            29 L3
         66042 DGN/RL
L6           0 L3/DGN
                 (L3 (L) DGN/RL)

=> s l4 not py>1999
       7119107 PY>1999
L7          28 L4 NOT PY>1999

=> s tumor? or cancer? or neoplas?
        440617 TUMOR?
        305237 CANCER?
        462188 NEOPLAS?
L8      730006 TUMOR? OR CANCER? OR NEOPLAS?

=> s l8 and l7
L9           0 L8 AND L7

=> d ibib l7

L7   ANSWER 1 OF 28  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        1995:413350  CAPLUS
DOCUMENT NUMBER:         122:176988
TITLE:                   Synthesis of Pyrroloquinolinequinone Analogs.
                         Molecular Structure and Moessbauer and Magnetic
                         Properties of Their Iron Complexes
AUTHOR(S):               Tommasi, L.; Shechter-Barloy, L.; Varech, D.;
                         Battioni, J.-P.; Donnadieu, B.; Verelst, M.;
                         Bousseksou, A.; Mansuy, D.; Tuchagues, J.-P.
CORPORATE SOURCE:        Laboratoire de Chimie de Coordination, CNRS, Toulouse,
                         31077, Fr.
SOURCE:                  Inorganic Chemistry (1995), 34(6), 1514-23
                         CODEN: INOCAJ; ISSN: 0020-1669
PUBLISHER:               American Chemical Society
DOCUMENT TYPE:           Journal
LANGUAGE:                English


=> d hitstr l7
```

```
L7   ANSWER 1 OF 28  CAPLUS  COPYRIGHT 2006 ACS on STN
IT   161470-03-7P 161470-04-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and complexation with iron)
RN   161470-03-7  CAPLUS
CN   Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dimethoxy-, 1-methyl ester
     (9CI)  (CA INDEX NAME)


/ Structure 42 in file .gra /

RN   161470-04-8  CAPLUS
CN   Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dihydroxy-, 1-methyl ester
     (9CI)  (CA INDEX NAME)


/ Structure 43 in file .gra /

IT   161470-01-5P
     RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
        (preparation and magnetic moment of)
RN   161470-01-5  CAPLUS
CN   Iron, chlorobis[1-methyl 5,6-dihydroxybenzo[f]quinoline-1,3-
     dicarboxylato(3-)-O5,O6]-, compd. with N,N-diethylethanamine hydrochloride
     (1:2) (9CI)  (CA INDEX NAME)

     CM   1

     CRN  161470-00-4
     CMF  C32 H16 Cl Fe N2 O12
     CCI  CCS


/ Structure 44 in file .gra /


     CM   2

     CRN  554-68-7
     CMF  C6 H15 N . Cl H


/ Structure 45 in file .gra /



=> d his

     (FILE 'HOME' ENTERED AT 08:47:38 ON 11 SEP 2006)

     FILE 'REGISTRY' ENTERED AT 08:48:06 ON 11 SEP 2006
L1              STRUCTURE UPLOADED
L2            1 S L1 EXA FULL
L3           21 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 08:49:49 ON 11 SEP 2006
L4           29 S L3
L5            0 S L3/THU
L6            0 S L3/DGN
L7           28 S L4 NOT PY>1999
L8       730006 S TUMOR? OR CANCER? OR NEOPLAS?
```

```
L9            0 S L8 AND L7

=> s technium
L10           2 TECHNIUM

=> s Tc99
L11         147 TC99

=> s l11 and l4
L12           0 L11 AND L4

=> s antibod? and l4
         470558 ANTIBOD?
L13           0 ANTIBOD? AND L4

=> s radio? and l4
         639924 RADIO?
L14           1 RADIO? AND L4

=> d ibib

L14  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2000:608618  CAPLUS
DOCUMENT NUMBER:          133:204807
TITLE:                    Molecules for the treatment and diagnosis of tumors
INVENTOR(S):              Alberto, Roger Ariel; Schibli, Roger
PATENT ASSIGNEE(S):       Mallinckrodt Inc., USA
SOURCE:                   PCT Int. Appl., 28 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 2000050086         A1    20000831    WO 2000-EP1553          20000224
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     CA 2360419            AA    20000831    CA 2000-2360419         20000224
     EP 1154798            A1    20011121    EP 2000-910711          20000224
     EP 1154798            B1    20060510
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, CY
     JP 2002537360         T2    20021105    JP 2000-600696          20000224
     AT 325624             E     20060615    AT 2000-910711          20000224
     US 6844425            B1    20050118    US 2001-913788          20010815
     US 2005019254         A1    20050127    US 2004-707994          20040130
PRIORITY APPLN. INFO.:                       US 1999-121340P     P   19990224
                                             EP 1999-200754      A   19990312
                                             WO 2000-EP1553      W   20000224
                                             US 2001-913788      A1  20010815
REFERENCE COUNT:          10    THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
```

=>

---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	29.21	253.34

STN INTERNATIONAL LOGOFF AT 08:56:34 ON 11 SEP 2006

Connecting via Winsock to STN

Welcome to STN International! Enter x:
x
Welcome to STN International! Enter x:
LOGINID:SSSPTA1642BJF

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

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NEWS 6	MAY 19	Derwent World Patents Index to be reloaded and enhanced
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NEWS 8	MAY 30	The F-Term thesaurus is now available in CA/CAplus
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NEWS 10	JUN 26	TULSA/TULSA2 reloaded and enhanced with new search and and display fields
NEWS 11	JUN 28	Price changes in full-text patent databases EPFULL and PCTFULL
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NEWS 13	JUl 14	FSTA enhanced with Japanese patents
NEWS 14	JUl 19	Coverage of Research Disclosure reinstated in DWPI
NEWS 15	AUG 09	INSPEC enhanced with 1898-1968 archive
NEWS 16	AUG 28	ADISCTI Reloaded and Enhanced
NEWS 17	AUG 30	CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 18	SEP 11	CA/CAplus enhanced with more pre-1907 records

NEWS EXPRESS JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

```
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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* * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 11:15:54 ON 11 SEP 2006

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 11:16:16 ON 11 SEP 2006
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DICTIONARY FILE UPDATES:  10 SEP 2006  HIGHEST RN 906318-57-8

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=>
Uploading c:\program files\stnexp\queries\10707994 fig.2

L1      STRUCTURE UPLOADED

=>

---Logging off of STN---



=>
Executing the logoff script...
```

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.44	0.65

STN INTERNATIONAL LOGOFF AT 11:16:43 ON 11 SEP 2006

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Welcome to STN International! Enter x:x

LOGINID:SSSPTA1642BJF

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS 5	MAY 11	KOREAPAT updates resume
NEWS 6	MAY 19	Derwent World Patents Index to be reloaded and enhanced
NEWS 7	MAY 30	IPC 8 Rolled-up Core codes added to CA/CAplus and USPATFULL/USPAT2
NEWS 8	MAY 30	The F-Term thesaurus is now available in CA/CAplus
NEWS 9	JUN 02	The first reclassification of IPC codes now complete in INPADOC
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NEWS 11	JUN 28	Price changes in full-text patent databases EPFULL and PCTFULL
NEWS 12	JUl 11	CHEMSAFE reloaded and enhanced
NEWS 13	JUl 14	FSTA enhanced with Japanese patents
NEWS 14	JUl 19	Coverage of Research Disclosure reinstated in DWPI
NEWS 15	AUG 09	INSPEC enhanced with 1898-1968 archive
NEWS 16	AUG 28	ADISCTI Reloaded and Enhanced
NEWS 17	AUG 30	CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 18	SEP 11	CA/CAplus enhanced with more pre-1907 records

NEWS EXPRESS	JUNE 30 CURRENT WINDOWS VERSION IS V8.01b, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.
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FILE 'HOME' ENTERED AT 11:18:15 ON 11 SEP 2006

=> file reg
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.21 0.21

FILE 'REGISTRY' ENTERED AT 11:18:27 ON 11 SEP 2006
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DICTIONARY FILE UPDATES: 10 SEP 2006 HIGHEST RN 906318-57-8

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=>
Uploading c:\program files\stnexp\queries\10707994 fig.2b

L1 STRUCTURE UPLOADED

=> s l1 exa full
FULL SEARCH INITIATED 11:18:47 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 22 TO ITERATE

100.0% PROCESSED 22 ITERATIONS 1 ANSWERS
SEARCH TIME: 00.00.01

L2 1 SEA EXA FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 56.54 56.75

FILE 'CAPLUS' ENTERED AT 11:18:51 ON 11 SEP 2006
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FILE LAST UPDATED: 10 Sep 2006 (20060910/ED)

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=> s l1
   REG1stRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

SAMPLE SEARCH INITIATED 11:18:54 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -   74 TO ITERATE

100.0% PROCESSED   74 ITERATIONS   2 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS: 964 TO   1996
PROJECTED ANSWERS: 2 TO   124

L3   2 SEA SSS SAM L1

L4   6 L3

=> d ibib 1-6

L4   ANSWER 1 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1980:171538 CAPLUS
DOCUMENT NUMBER: 92:171538
TITLE: Reductive electrochemical carboxylation of nitrogen
                         heterocycles
AUTHOR(S):   Hess, Ulrich; Fuchs, Peter; Jacob, Elke; Lund, Henning
CORPORATE SOURCE: Sekt. Chem., Humboldt-Univ., Berlin, DDR-104, Ger.
                         Dem. Rep.
SOURCE: Zeitschrift fuer Chemie (1980), 20(2), 64-5
                         CODEN: ZECEAL; ISSN: 0044-2402
DOCUMENT TYPE: Journal
LANGUAGE: German

L4   ANSWER 2 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1978:6691 CAPLUS
DOCUMENT NUMBER: 88:6691
TITLE: Synthesis of 3-carbethoxy-8-methoxybenzo[f]isoquinoline as a key intermediate in the synthesis of 14-aza-13-norequilenin methyl ether
AUTHOR(S): Mahajan, R. K.; Singh, Manmohan
CORPORATE SOURCE: Dep. Chem., Himachal Pradesh Univ., Simla, India
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1977), 15B(5), 491-2
CODEN: IJSBDB; ISSN: 0376-4699
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 88:6691

L4 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1975:593579 CAPLUS
DOCUMENT NUMBER: 83:193579
TITLE: Total synthesis of 13- and 14-azaequilenines by heterocycloaddition
AUTHOR(S): Zunnebeld, W. A.; Speckamp, W. N.
CORPORATE SOURCE: Lab. Org. Chem., Univ. Amsterdam, Amsterdam, Neth.
SOURCE: Tetrahedron (1975), 31(15), 1717-21
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English

L4 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1970:473505 CAPLUS
DOCUMENT NUMBER: 73:73505
TITLE: Androgenic, antiandrogenic, and anabolic activity of azasteroids on immature castrated rats
AUTHOR(S): Saksena, S. K.; Chaudhury, Ranjit R.
CORPORATE SOURCE: Dep. Pharmacol., Postgrad. Inst. Med. Educ. Res., Chandigarh, India
SOURCE: Indian Journal of Medical Research (1913-1988) (1970), 58(4), 513-18
CODEN: IJMRAQ; ISSN: 0019-5340
DOCUMENT TYPE: Journal
LANGUAGE: English

L4 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1966:75962 CAPLUS
DOCUMENT NUMBER: 64:75962
ORIGINAL REFERENCE NO.: 64:14243c-g
TITLE: Aza steroids
INVENTOR(S): R. H. Jones, Emrys
PATENT ASSIGNEE(S): Imperial Chemical Industries Ltd.
SOURCE: 4 pp.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1017700		19660119	GB	19630515

L4 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1965:454552 CAPLUS
DOCUMENT NUMBER: 63:54552
ORIGINAL REFERENCE NO.: 63:9912a-e

TITLE: Reaction of α-halo esters on α-amino ethers and α-amino nitriles in the presence of zinc or magnesium
AUTHOR(S): Canceill, Josette; Jacques, Jean
CORPORATE SOURCE: College de France, Paris
SOURCE: Bulletin de la Societe Chimique de France (1965), (4), 903-9
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: French
OTHER SOURCE(S): CASREACT 63:54552

=> s l3
L5 6 L3

=> file reg
COST IN U.S. DOLLARS SINCE FILE ENTRY 7.30 TOTAL SESSION 64.95
FULL ESTIMATED COST

FILE 'REGISTRY' ENTERED AT 11:19:42 ON 11 SEP 2006
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DICTIONARY FILE UPDATES: 10 SEP 2006 HIGHEST RN 906318-57-8

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=> s l1 sss full
FULL SEARCH INITIATED 11:19:49 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1257 TO ITERATE

100.0% PROCESSED 1257 ITERATIONS 37 ANSWERS
SEARCH TIME: 00.00.01

L6 37 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY 166.94 TOTAL SESSION 231.89
FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 11:19:53 ON 11 SEP 2006
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FILE COVERS 1907 - 11 Sep 2006 VOL 145 ISS 12
FILE LAST UPDATED: 10 Sep 2006 (20060910/ED)

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They are available for your review at:

http://www.cas.org/infopolicy.html

```
=> s l6
L7          37 L6

=> s cancer? or tumor? or neoplas?
         305237 CANCER?
         440617 TUMOR?
         462188 NEOPLAS?
L8       730006 CANCER? OR TUMOR? OR NEOPLAS?

=> s l8 and l7
L9            1 L8 AND L7

=> d ibib
```

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2000:608618 CAPLUS
DOCUMENT NUMBER:	133:204807
TITLE:	Molecules for the treatment and diagnosis of tumors
INVENTOR(S):	Alberto, Roger Ariel; Schibli, Roger
PATENT ASSIGNEE(S):	Mallinckrodt Inc., USA
SOURCE:	PCT Int. Appl., 28 pp. CODEN: PIXXD2
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050086	A1	20000831	WO 2000-EP1553	20000224
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2360419	AA	20000831	CA 2000-2360419	20000224

```
     EP 1154798           A1    20011121    EP 2000-910711         20000224
     EP 1154798           B1    20060510
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, CY
     JP 2002537360        T2    20021105    JP 2000-600696         20000224
     AT 325624            E     20060615    AT 2000-910711         20000224
     US 6844425           B1    20050118    US 2001-913788         20010815
     US 2005019254        A1    20050127    US 2004-707994         20040130
PRIORITY APPLN. INFO.:                      US 1999-121340P     P  19990224
                                            EP 1999-200754      A  19990312
                                            WO 2000-EP1553      W  20000224
                                            US 2001-913788      A1 20010815
REFERENCE COUNT:         10    THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS
                               RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> s l7 and metal
       1675553 METAL
        846029 METALS
       2032939 METAL
                 (METAL OR METALS)
L10         10 L7 AND METAL

=> d ibib 1-5

L10  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2000:608618  CAPLUS
DOCUMENT NUMBER:         133:204807
TITLE:                   Molecules for the treatment and diagnosis of tumors
INVENTOR(S):             Alberto, Roger Ariel; Schibli, Roger
PATENT ASSIGNEE(S):      Mallinckrodt Inc., USA
SOURCE:                  PCT Int. Appl., 28 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    --------------------   --------
     WO 2000050086         A1    20000831    WO 2000-EP1553         20000224
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     CA 2360419            AA    20000831    CA 2000-2360419        20000224
     EP 1154798            A1    20011121    EP 2000-910711         20000224
     EP 1154798            B1    20060510
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, CY
     JP 2002537360         T2    20021105    JP 2000-600696         20000224
     AT 325624             E     20060615    AT 2000-910711         20000224
     US 6844425            B1    20050118    US 2001-913788         20010815
     US 2005019254         A1    20050127    US 2004-707994         20040130
PRIORITY APPLN. INFO.:                      US 1999-121340P     P  19990224
                                            EP 1999-200754      A  19990312
                                            WO 2000-EP1553      W  20000224
                                            US 2001-913788      A1 20010815
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REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:413350 CAPLUS
DOCUMENT NUMBER: 122:176988
TITLE: Synthesis of Pyrroloquinolinequinone Analogs. Molecular Structure and Moessbauer and Magnetic Properties of Their Iron Complexes
AUTHOR(S): Tommasi, L.; Shechter-Barloy, L.; Varech, D.; Battioni, J.-P.; Donnadieu, B.; Verelst, M.; Bousseksou, A.; Mansuy, D.; Tuchagues, J.-P.
CORPORATE SOURCE: Laboratoire de Chimie de Coordination, CNRS, Toulouse, 31077, Fr.
SOURCE: Inorganic Chemistry (1995), 34(6), 1514-23
CODEN: INOCAJ; ISSN: 0020-1669
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

L10 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1957:900 CAPLUS
DOCUMENT NUMBER: 51:900
ORIGINAL REFERENCE NO.: 51:125h-i,126a
TITLE: 5,6-Benzoquinaldinic acid as an analytical reagent. I. Determination of thorium and zirconium
AUTHOR(S): Majumdar, Anil Kumar; Banerjee, Siddheswar
CORPORATE SOURCE: Coll. Eng. Tech., Bengal, Calcutta
SOURCE: Analytica Chimica Acta (1956), 14, 306-10
CODEN: ACACAM; ISSN: 0003-2670
DOCUMENT TYPE: Journal
LANGUAGE: English

L10 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1955:83186 CAPLUS
DOCUMENT NUMBER: 49:83186
ORIGINAL REFERENCE NO.: 49:15612c-d
TITLE: 5,6-Benzoquinaldinic acid as an analytical reagent. V. Separation of cadmium from different elements
AUTHOR(S): Majumdar, Anil Kumar; De, Anil Kumar
CORPORATE SOURCE: Coll. Eng. Technol., Bengal, Calcutta
SOURCE: J. Indian Chem. Soc. (1955), 32, 85-8
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

L10 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1954:31977 CAPLUS
DOCUMENT NUMBER: 48:31977
ORIGINAL REFERENCE NO.: 48:5713b-e
TITLE: Diphenylcarbazone as a colorimetric reagent for bivalent chromium
AUTHOR(S): Bose, Monisha
CORPORATE SOURCE: Univ. Coll. Sci., Calcutta
SOURCE: Science and Culture (1953), 19, 213-14
CODEN: SCINAL; ISSN: 0036-8156
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

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L10 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

IT 289661-18-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(radiolabeled complexes for treatment and diagnosis of tumors)
RN 289661-18-3 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid, hydrobromide (9CI) (CA INDEX NAME)

/ Structure 46 in file .gra /

L10 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
IT 161470-07-1P, 5,6-Dimethoxy-1,3-bis(methoxycarbonyl)benzo[f]quinoline
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and base hydrolysis of)
RN 161470-07-1 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dimethoxy-, dimethyl ester (9CI) (CA INDEX NAME)

/ Structure 47 in file .gra /

IT 161470-03-7P 161470-04-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and complexation with iron)
RN 161470-03-7 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dimethoxy-, 1-methyl ester (9CI) (CA INDEX NAME)

/ Structure 48 in file .gra /

RN 161470-04-8 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dihydroxy-, 1-methyl ester (9CI) (CA INDEX NAME)

/ Structure 49 in file .gra /

IT 161470-01-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and magnetic moment of)
RN 161470-01-5 CAPLUS
CN Iron, chlorobis[1-methyl 5,6-dihydroxybenzo[f]quinoline-1,3-dicarboxylato(3-)-O5,O6]-, compd. with N,N-diethylethanamine hydrochloride (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 161470-00-4
CMF C32 H16 Cl Fe N2 O12
CCI CCS

/ Structure 50 in file .gra /

CM 2

CRN 554-68-7
CMF C6 H15 N . Cl H

/ Structure 51 in file .gra /

IT 142422-23-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, protection, oxidation, base hydrolysis, and complexation with iron)
RN 142422-23-9 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dihydroxy-, dimethyl ester (9CI) (CA INDEX NAME)

/ Structure 52 in file .gra /

L10 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(formed therefrom, in titanium determination)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 53 in file .gra /

(in analysis of Th and Zr, and compds. formed therefrom
(in titanium detn., and Ti deriv. formed therefrom

L10 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(in cadmium determination)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 54 in file .gra /

L10 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(in analysis)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 55 in file .gra /

L10 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(in analysis)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 56 in file .gra /

L10 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

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IT   65714-31-0, Benzo[f]quinoline-3-carboxylic acid
        (and salts, in analytical chemistry)
RN   65714-31-0  CAPLUS
CN   Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI)  (CA INDEX NAME)


/ Structure 57 in file .gra /


L10  ANSWER 8 OF 10  CAPLUS  COPYRIGHT 2006 ACS on STN
IT   65714-31-0, Benzo[f]quinoline-3-carboxylic acid
        (in cadmium determination)
RN   65714-31-0  CAPLUS
CN   Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI)  (CA INDEX NAME)


/ Structure 58 in file .gra /


L10  ANSWER 9 OF 10  CAPLUS  COPYRIGHT 2006 ACS on STN
IT   65714-31-0, 5,6-Benzoquinaldic acid
        (in analysis)
RN   65714-31-0  CAPLUS
CN   Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI)  (CA INDEX NAME)


/ Structure 59 in file .gra /


L10  ANSWER 10 OF 10  CAPLUS  COPYRIGHT 2006 ACS on STN
IT   65714-31-0, 5,6-Benzoquinoline-3-carboxylic acid
        (preparation of)
RN   65714-31-0  CAPLUS
CN   Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI)  (CA INDEX NAME)


/ Structure 60 in file .gra /



=> d ibib abs hitstr 1-10

L10  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:        2000:608618  CAPLUS
DOCUMENT NUMBER:         133:204807
TITLE:                   Molecules for the treatment and diagnosis of tumors
INVENTOR(S):             Alberto, Roger Ariel; Schibli, Roger
PATENT ASSIGNEE(S):      Mallinckrodt Inc., USA
SOURCE:                  PCT Int. Appl., 28 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
     WO 2000050086        A1    20000831    WO 2000-EP1553         20000224
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
```

SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2360419	AA	20000831	CA 2000-2360419	20000224
EP 1154798	A1	20011121	EP 2000-910711	20000224
EP 1154798	B1	20060510		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
JP 2002537360	T2	20021105	JP 2000-600696	20000224
AT 325624	E	20060615	AT 2000-910711	20000224
US 6844425	B1	20050118	US 2001-913788	20010815
US 2005019254	A1	20050127	US 2004-707994	20040130
PRIORITY APPLN. INFO.:			US 1999-121340P	P 19990224
			EP 1999-200754	A 19990312
			WO 2000-EP1553	W 20000224
			US 2001-913788	A1 20010815

AB The invention relates to mols. for treatment and diagnosis of tumors and malignancies, comprising a tumor seeking biomol., which is coupled to an intercalating moiety, which is capable of complexing a metal, which metal is preferably a radioactive metal, to the use of these mols. and to therapeutic and diagnostic compns. containing them.

IT 289661-18-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(radiolabeled complexes for treatment and diagnosis of tumors)

RN 289661-18-3 CAPLUS

CN Benzo[f]quinoline-3-carboxylic acid, hydrobromide (9CI) (CA INDEX NAME)

/ Structure 61 in file .gra /

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:413350 CAPLUS

DOCUMENT NUMBER: 122:176988

TITLE: Synthesis of Pyrroloquinolinequinone Analogs. Molecular Structure and Moessbauer and Magnetic Properties of Their Iron Complexes

AUTHOR(S): Tommasi, L.; Shechter-Barloy, L.; Varech, D.; Battioni, J.-P.; Donnadieu, B.; Verelst, M.; Bousseksou, A.; Mansuy, D.; Tuchagues, J.-P.

CORPORATE SOURCE: Laboratoire de Chimie de Coordination, CNRS, Toulouse, 31077, Fr.

SOURCE: Inorganic Chemistry (1995), 34(6), 1514-23
CODEN: INOCAJ; ISSN: 0020-1669

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Four complexes, FeII(L2)2 (1), [FeII(L2)(Cl)(MeOH)2]2 (2), FeII(L3H2)2 (3), and FeIII(L4)2Cl·2(Et3N·HCl)·0.5MeCN (4), wherein L2H, L3H3, and L4H are analogs of pyrroloquinolinequinone or methoxatin (PQQ), were synthesized and studied. 2 Crystallizes in the triclinic system, space group P.hivin.1, Z = 2, a 9.588(6), b 10.011(7), c 11.770(5) Å, α 96.66(5), β 99.21(5), and γ 107.93(7)°. The structure was solved by direct methods and refined to conventional agreement indexes R = 0.054 and Rw = 0.063 with 2683 unique reflections for which I > 3σ(I). The mol. structure of 2 consists of discrete [FeII(L2)(Cl)(MeOH)2] mols. associated into dimeric units through the carboxylate function of L2. The carboxylate O atoms of

the two mols. constituting the dimeric unit bridge the metal centers affording a Fe···Fe' separation of 3.645(4) Å. The distorted coordination octahedron around each Fe(II) includes the pyridine N and carboxylate O atoms of L2, the chloride anion, and the O atom of two MeOH mols. The synthesis and IR, Moessbauer, and magnetic susceptibility studies of 1-4 evidence the variety of structural types and nuclearities obtained for Fe complexes of PQQ analogs, depending upon the stoichiometry and pH of the reactions. Complexes 1 and 3 (mononuclear) and 4 (polynuclear) were characterized by the 1:2 Fe:L ratio while complex 2 (dimer) was characterized by the 1:1 Fe:L ratio. Among the analogs used, those of the reduced form of PQQ chelate Fe through their tridentate site while chelation occurs preferentially at the quinonic site for the analog of the oxidized form of PQQ.

IT 161470-07-1P, 5,6-Dimethoxy-1,3-bis(methoxycarbonyl)benzo[f]quinoline
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and base hydrolysis of)
RN 161470-07-1 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dimethoxy-, dimethyl ester (9CI) (CA INDEX NAME)

/ Structure 62 in file .gra /

IT 161470-03-7P 161470-04-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and complexation with iron)
RN 161470-03-7 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dimethoxy-, 1-methyl ester (9CI) (CA INDEX NAME)

/ Structure 63 in file .gra /

RN 161470-04-8 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dihydroxy-, 1-methyl ester (9CI) (CA INDEX NAME)

/ Structure 64 in file .gra /

IT 161470-01-5P
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and magnetic moment of)
RN 161470-01-5 CAPLUS
CN Iron, chlorobis[1-methyl 5,6-dihydroxybenzo[f]quinoline-1,3-dicarboxylato(3-)-O5,O6]-, compd. with N,N-diethylethanamine hydrochloride (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 161470-00-4
CMF C32 H16 Cl Fe N2 O12
CCI CCS

/ Structure 65 in file .gra /

CM 2

CRN 554-68-7
CMF C6 H15 N . Cl H

/ Structure 66 in file .gra /

IT 142422-23-9P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, protection, oxidation, base hydrolysis, and complexation with iron)
RN 142422-23-9 CAPLUS
CN Benzo[f]quinoline-1,3-dicarboxylic acid, 5,6-dihydroxy-, dimethyl ester (9CI) (CA INDEX NAME)

/ Structure 67 in file .gra /

L10 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1957:900 CAPLUS
DOCUMENT NUMBER: 51:900
ORIGINAL REFERENCE NO.: 51:125h-i,126a
TITLE: 5,6-Benzoquinaldinic acid as an analytical reagent. I. Determination of thorium and zirconium
AUTHOR(S): Majumdar, Anil Kumar; Banerjee, Siddheswar
CORPORATE SOURCE: Coll. Eng. Tech., Bengal, Calcutta
SOURCE: Analytica Chimica Acta (1956), 14, 306-10
CODEN: ACACAM; ISSN: 0003-2670
DOCUMENT TYPE: Journal
LANGUAGE: English
AB cf. C.A. 48, 4358i, 5713b. 5,6-Benzoquinaldinic acid (I) ppts. Th quantitatively at pH 3.0 or greater to form the anhydrous compound Th(C14H8O2N)4 which can be weighed as such after drying at 110° or after washing with alc. and acetone, or which can be ignited to the oxide. The precipitation of Zr with I is quant. at pH values of 1.8 or greater, but the precipitate varies in composition, hence must be ignited to the oxide. Separation of Th and Zr from the rare earths is accomplished by simple precipitation from acid solution The tendency of Mg and the alkaline earths to coppt. is countered by the addition of NH4Cl.
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(formed therefrom, in titanium determination)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 68 in file .gra /

(in analysis of Th and Zr, and compds. formed therefrom
(in titanium detn., and Ti deriv. formed therefrom

L10 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1955:83186 CAPLUS
DOCUMENT NUMBER: 49:83186
ORIGINAL REFERENCE NO.: 49:15612c-d
TITLE: 5,6-Benzoquinaldinic acid as an analytical reagent. V. Separation of cadmium from different elements
AUTHOR(S): Majumdar, Anil Kumar; De, Anil Kumar
CORPORATE SOURCE: Coll. Eng. Technol., Bengal, Calcutta

SOURCE: J. Indian Chem. Soc. (1955), 32, 85-8
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 48, 4358i. The reagent 5,6-benzoquinaldinic acid can be used for the estimation of Cd and for its separation from tartrate, phosphate, arsenate, vanadate, tungstate, molybdate, alkaline earths, Ag, Hg, Pb, Be, Th, Zr, U, rare earths, Fe, Al, Cr, Ti, Bi, Sb, and Sn either by the proper control of pH or by the use of complexing agents, such as thiourea and tartrate.
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(in cadmium determination)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 69 in file .gra /

L10 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1954:31977 CAPLUS
DOCUMENT NUMBER: 48:31977
ORIGINAL REFERENCE NO.: 48:5713b-e
TITLE: Diphenylcarbazone as a colorimetric reagent for bivalent chromium
AUTHOR(S): Bose, Monisha
CORPORATE SOURCE: Univ. Coll. Sci., Calcutta
SOURCE: Science and Culture (1953), 19, 213-14
CODEN: SCINAL; ISSN: 0036-8156
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Diphenylcarbazone gives an intense red-violet coloration with Cr++ (C.A. 47, 10495a). This reaction is suitable for detecting and estimating Cr++. The addition of Cr++ to an excess of carbazone solution produces a deep red-violet coloration due to the formation of a chromous-carbazone inner-metallic complex. The complex has an absorption maximum at 540 mμ. The acidity of the solution influences the intensity of the color, but as the interference caused by many cations can be minimized by mineral acids in excess, it is necessary to have the solution 0.1N in acid in the presence of excess of the reagent. The only interfering element is Hg, which gives a blue-violet coloration. This can be greatly reduced by the addition of NaCl. Chromate or any other oxidizing agent must be absent. As little as 0.1 γ per cc. can be detected this way. The chromous-carbazone system can also be used for the determination of Cr++. Since the presence of air interferes with the intensity of color, the exclusion of air during addition of $CrSO_4$ and subsequent color development is imperative. The color is stable for several hrs. The optical ds., however, should be measured almost immediately.
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(in analysis)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 70 in file .gra /

L10 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1954:31976 CAPLUS
DOCUMENT NUMBER: 48:31976
ORIGINAL REFERENCE NO.: 48:5713b
TITLE: 5,6-Benzoquinaldinic acid as an analytical reagent

AUTHOR(S): Majumdar, Anil Kumar
CORPORATE SOURCE: Coll. Eng. Technol., Calcutta
SOURCE: Science and Culture (1953), 19, 265-6
CODEN: SCINAL; ISSN: 0036-8156
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 47, 2628c, 10398f; 48, 1195d. The reagent is used to detect Mg, Hg, and other elements.
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(in analysis)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 71 in file .gra /

L10 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1953:61397 CAPLUS
DOCUMENT NUMBER: 47:61397
ORIGINAL REFERENCE NO.: 47:10398f-h
TITLE: 5, 6-Benzoquinaldinic acid as an analytical reagent. III. Estimation of zinc, cobalt, nickel, and manganese
AUTHOR(S): Majumdar, Anil Kumar; De, Anil Kumar
CORPORATE SOURCE: Coll. Eng. Technol., Bengal, Calcutta
SOURCE: J. Indian Chem. Soc. (1953), 30, 123-8
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 47, 2628c. The reagent 5, 6-benzoquinaldinic acid was used for the estimation of Zn, Co, Ni, and Mn, the study of the pH ranges over which they are accurately estimated and the effect of temperature on their salts. The points of incipient precipitation for the elements, Zn, Co, Ni, and Mn are at about pH 2.08, 2.14, 2.15 and 1.75, resp., and for their complete precipitation 2.85, 3.24, 3.00, and 2.90. The salts can be dried at 110-115° and weighed as the hydrated salts, e.g., Zn with 1 mole of H2O, Co with 2, and both Ni and Mn with 2.5 moles of H2O. The Co salt can also be dried at 150-155° and weighed as the anhydrous salt.
IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(and salts, in analytical chemistry)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 72 in file .gra /

L10 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1953:15170 CAPLUS
DOCUMENT NUMBER: 47:15170
ORIGINAL REFERENCE NO.: 47:2628b-d
TITLE: 5,6-Benzoquinaldinic acid as an analytical reagent. II. Estimation of cadmium and its separation from copper
AUTHOR(S): Majumdar, Anil Kumar; De, Anil Kumar
CORPORATE SOURCE: Coll. Eng. Technol., Calcutta
SOURCE: J. Indian Chem. Soc. (1952), 29, 499-506
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. ibid. 255-62. Cd is completely precipitated with 5, 6-benzoquinaldinic acid (I) from solns. of pH 3.12-9.40. The precipitate formed below pH 3.85 has the

formula Cd(C14H8NO2)2.1.5 H2O when dried at 105-110°; this loses H2O at 122°, forming the anhydrous salt, which is stable up to 269°. If the pH is above 3.85, the salt retains excess H2O which can only be removed by drying at 170-175°, and in addition the precipitate is less crystalline and less well adapted to filtration and washing. For the determination of Cd in the presence of Cu, the Cu is first precipitated with I at pH 1.15-1.85, then the filtrate is brought to pH 3.12-3.85 for the precipitation of Cd.

IT 65714-31-0, Benzo[f]quinoline-3-carboxylic acid
(in cadmium determination)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 73 in file .gra /

L10 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1949:38498 CAPLUS
DOCUMENT NUMBER: 43:38498
ORIGINAL REFERENCE NO.: 43:6935c-e
TITLE: 5,6-Benzoquinaldic acid as an analytical reagent
AUTHOR(S): Mallik, Ajit Kumar; Mazumdar, Anil Kumar
SOURCE: Science and Culture (1949), 14, 477-8
CODEN: SCINAL; ISSN: 0036-8156
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Practically all bivalent metals are precipitated by 5,6-benzoquinaldic acid. Cu gives a light green crystalline precipitate, Cd, Co, Ni, Mg, Ca, Sr, Ba, Zn, Mn, Ag, Hg, and Pb give white ppts. The Cu salt is sparingly soluble in dilute mineral acid and AcOH, soluble in concentrated acid, excess NH4OH, and CN- solution Ba, Ca, and Sr salts are soluble in hot water. Zn, Mn, Ag, Cd, Co, and Ni salts are soluble in CN- solution The Pb and Hg salts are soluble in NH4OAc. The reagent can be used in the determination of Cu. The composition of the Cu salt, dried at 110-20°, is C14H8NO2Cu.11/2H2O. The Fe++ salt is red, dissolves in CN- solution, and the intensity of the color of this solution varies with Fe++ concentration; this suggests the use of 5,6-benzoquinaldic acid in the colorimetric determination of Fe.

IT 65714-31-0, 5,6-Benzoquinaldic acid
(in analysis)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 74 in file .gra /

L10 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1935:19788 CAPLUS
DOCUMENT NUMBER: 29:19788
ORIGINAL REFERENCE NO.: 29:2536i,2537a-g
TITLE: Action of cyanogen iodide on quinolines
AUTHOR(S): Mumm, Otto; Bruhn, Christian
SOURCE: Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1935), 68B, 176-83
CODEN: BDCBAD; ISSN: 0365-9488

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB BrCN and HCN acting simultaneously at room temperature in ether on quinoline (I) give the so-called quinoline dicyanide, C9H7N(CN)2, which shows an interesting isomerism phenomenon (C. A. 29, 1821.7.). ClCN behaves like BrCN. The present work with ICN was undertaken in the hope of shedding light on the isomerism but ICN was found to act entirely differently. The course of the reaction is not influenced by the presence or absence of HCN, and the product, I. ICN, is of an entirely different character. It is completely stable toward water and even toward KCN or HCN; the reaction takes place with equal ease with all quinolines, even when they are α-or o-substituted; the products give no precipitate with AgNO3 in dilute HNO3, and no I or CN ion can be detected after long shaking in aqueous suspension with BaCO3 or saturated NaHCO3; the compds. are insol. in water but easily soluble in dilute acids. The quinoline component can, however, easily be removed by means of all substances which form difficultly soluble ppts. with I (picric acid, HClO4, tartaric acid, Hg(CN)2) either in alc. or in ether. Concentrated HCl gives the compound I.ICl.HCl (II), m. 118° (Dittmar, Ber. 18, 1613(1885)), and HBr and HI yield the corresponding compds., also all long since known. II is formed either from the dry I.ICN with concentrated aqueous or alc. HCl in the cold or in benzene with HCl gas.

The earlier workers failed to observe that when II is recrystd. from AcOEt it is partly converted into a new compound insol. in AcOEt (when II is heated above 100° the conversion is quant.) which m. 123° and is bimol., II.I.HCl (III); on recrystn. from dilute HCl it regenerates II, but from aqueous alc. it seps. as I.ICl, m. 157° (which is also formed directly from II by long shaking with an aqueous suspension of BaCO3, with cold saturated NaHCO3, or with much cold water). Both of these compds., like I.ICN, give a precipitate of quinoline picrate with picric acid. With NH3 in cold water, II gives C9H7NI.HI, m. 90-1°. All the above properties of I.ICN are best explained by assigning to it a structure similar to that of the complex metal-am-monia compds. The following compds. of the type I.ICN were prepared: Quinoline, m. 104°; p-toluquinoline, m. 55-6°; quinaldine, m. 98°; α-naphthoquinoline, m. 116-17°; the corresponding compds. of the type II (quinolinium dichloroiodides), obtained from the above with concentrated HCl, m. 118-20°, 146-8°, 112-13°, 166°, and at 100° change into the compds. III (quinolinium trichloroiodides), m. 123°, -, 148-9°, 194-5°. In an attempt to effect an isomerization such as had been Observed with the BrCN compds., β-naphthoquinoline-ICN was slowly heated to 130° whereupon a very vigorous reaction set in, yielding a bimol. compound rich in I which, on boiling with NaOH and subsequent treatment with 50% AcOH, gave β-naphthoquinoline-α-carboxylic acid, m. 188-90°.
IT 65714-31-0, 5,6-Benzoquinoline-3-carboxylic acid
(preparation of)
RN 65714-31-0 CAPLUS
CN Benzo[f]quinoline-3-carboxylic acid (6CI, 7CI, 9CI) (CA INDEX NAME)

/ Structure 75 in file .gra /

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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FULL ESTIMATED COST                                    91.74     323.63

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 NEWS  1          Web Page for STN Seminar Schedule - N. America
 NEWS  2  OCT 02  CA/CAplus enhanced with pre-1907 records from Chemisches
                  Zentralblatt
 NEWS  3  OCT 19  BEILSTEIN updated with new compounds
 NEWS  4  NOV 15  Derwent Indian patent publication number format enhanced
 NEWS  5  NOV 19  WPIX enhanced with XML display format
 NEWS  6  NOV 30  ICSD reloaded with enhancements
 NEWS  7  DEC 04  LINPADOCDB now available on STN
 NEWS  8  DEC 14  BEILSTEIN pricing structure to change
 NEWS  9  DEC 17  USPATOLD added to additional database clusters
 NEWS 10  DEC 17  IMSDRUGCONF removed from database clusters and STN
 NEWS 11  DEC 17  DGENE now includes more than 10 million sequences
 NEWS 12  DEC 17  TOXCENTER enhanced with 2008 MeSH vocabulary in
                  MEDLINE segment
 NEWS 13  DEC 17  MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
 NEWS 14  DEC 17  CA/CAplus enhanced with new custom IPC display formats
 NEWS 15  DEC 17  STN Viewer enhanced with full-text patent content
                  from USPATOLD
 NEWS 16  JAN 02  STN pricing information for 2008 now available
 NEWS 17  JAN 16  CAS patent coverage enhanced to include exemplified
                  prophetic substances
 NEWS 18  JAN 28  USPATFULL, USPAT2, and USPATOLD enhanced with new
                  custom IPC display formats
 NEWS 19  JAN 28  MARPAT searching enhanced
 NEWS 20  JAN 28  USGENE now provides USPTO sequence data within 3 days
                  of publication
 NEWS 21  JAN 28  TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS 22  JAN 28  MEDLINE and LMEDLINE reloaded with enhancements
 NEWS 23  FEB 08  STN Express, Version 8.3, now available
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 NEWS 24  FEB 20  PCI now available as a replacement to DPCI
 NEWS 25  FEB 25  IFIREF reloaded with enhancements
 NEWS 26  FEB 25  IMSPRODUCT reloaded with enhancements
 NEWS 27  FEB 29  WPINDEX/WPIDS/WPIX enhanced with ECLA and current
                  U.S. National Patent Classification


 NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

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FILE 'HOME' ENTERED AT 10:34:16 ON 18 MAR 2008

=>  file reg
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FULL ESTIMATED COST                                       0.21       0.21

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DICTIONARY FILE UPDATES:  17 MAR 2008  HIGHEST RN 1008496-49-8

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predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
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http://www.cas.org/support/stngen/stndoc/properties.html

=> E "PHENANTROLINE"/CN 25
E1            1     PHENANTHRYLMETHYL TRIETHYL AMMONIUM CHLORIDE/CN
E2            1     PHENANTOIN/CN
E3            0 --> PHENANTROLINE/CN
E4            1     PHENANTROPLAST/CN
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E5            1     PHENAPHAN/CN
E6            1     PHENAPHEN/CN
E7            1     PHENAPHTHAZINE/CN
E8            1     PHENAPRONIL/CN
E9            1     PHENAQUINN HYDROCHLORIDE/CN
E10           1     PHENAQUINN, HYDROCHLORIDE/CN
E11           1     PHENARCTIN/CN
E12           1     PHENARIDINE/CN
E13           1     PHENAROL/CN
E14           1     PHENARSAZINE/CN
E15           1     PHENARSAZINE CHLORIDE/CN
E16           1     PHENARSAZINE, 1,1',1''-NITRILOTRIS(1,6-DIHYDRO-/CN
E17           1     PHENARSAZINE, 1,1'-OXYBIS(1,6-DIHYDRO-/CN
E18           1     PHENARSAZINE, 1,1'-THIOBIS(1,6-DIHYDRO-/CN
E19           1     PHENARSAZINE, 1,2,3,4-TETRACHLORO-1,6-DIHYDRO-/CN
E20           1     PHENARSAZINE, 1,2,3-TRICHLORO-1,6-DIHYDRO-/CN
E21           1     PHENARSAZINE, 1,2,4-TRICHLORO-1,6-DIHYDRO-/CN
E22           1     PHENARSAZINE, 1,2,8-TRICHLORO-1,6-DIHYDRO-/CN
E23           1     PHENARSAZINE, 1,2,9-TRICHLORO-1,6-DIHYDRO-/CN
E24           1     PHENARSAZINE, 1,2-DICHLORO-1,6-DIHYDRO-7-METHYL-/CN
E25           1     PHENARSAZINE, 1,3,4-TRICHLORO-1,6-DIHYDRO-/CN

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E1            1     PHENANTHROIMIDAZOLE-2-AMINE/CN
E2            1     PHENANTHROL/CN
E3            1 --> PHENANTHROLINE/CN
E4            1     PHENANTHROLINE BIS(Π-ALLYL PALLADIUM) DICHLORIDE/CN
E5            1     PHENANTHROLINE COBALT(II) COMPLEX/CN
E6            1     PHENANTHROLINE PENTACARBONYLMOLYBDENUM/CN
E7            1     PHENANTHROLINE PENTACARBONYLTUNGSTEN/CN
E8            1     PHENANTHROLINE, COMPD. WITH NEODYMIUM CHLORIDE (NDCL3) (2:1)/CN
E9            1     PHENANTHROLINE, THIOUREA DERIV./CN
E10           1     PHENANTHROLINEDIONE/CN
E11           1     PHENANTHROLINIUM PENTACHLOROMANGANATE(III)/CN
E12           1     PHENANTHROLINIUM,
1,2,3,4-TETRAHYDRO-3-HYDROXY-4,4-DIMETHYL-4,7-, IODIDE/CN
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E14           1     PHENANTHROLINIUM,
7-METHYL-8-(N-(2-PHENYL-3-PYRROCOLINYL)FORMIMIDOYL)-1,7-/CN
E15           1     PHENANTHROLINIUM, 8-HYDROXY-7-METHYL-1,7-, IODIDE/CN
E16           1     PHENANTHRONE/CN
E17           1     PHENANTHRONE-TEREPHTHALIC ACID POLYMER/CN
E18           1     PHENANTHROPERYLENEDIONE/CN
E19           1     PHENANTHROPHENANTHRIDINE/CN
E20           1     PHENANTHROPYRIDINE/CN
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E22           1     PHENANTHROQUINOLINE, METHYL-/CN
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E24           1     PHENANTHROVIRIDIN AGLYCON/CN
E25           1     PHENANTHROVIRIDIN AGLYCON DIMETHYL ETHER/CN

=> S E3
L1            1 PHENANTHROLINE/CN

=> DIS L1 1 SQIDE
THE ESTIMATED COST FOR THIS REQUEST IS 6.65 U.S. DOLLARS
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L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2008 ACS on STN
RN   12678-01-2  REGISTRY
CN   Phenanthroline  (CA INDEX NAME)
MF   C12 H8 N2
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CI   COM, MAN
LC   STN Files: AGRICOLA, ANABSTR, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CIN, DETHERM*, EMBASE, IFICDB, IFIPAT, IFIUDB, PIRA, PROMT, TOXCENTER, TULSA, USPAT2, USPATFULL
       (*File contains numerically searchable property data)
DT.CA CAplus document type: Conference; Dissertation; Journal; Patent
RL.P   Roles from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role in record)
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

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             308 REFERENCES IN FILE CA (1907 TO DATE)
              93 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
             308 REFERENCES IN FILE CAPLUS (1907 TO DATE)
               4 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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=> s l1
L2   308 L1

=> s l1/thu

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          308 L1
       989322 THU/RL
L3          17 L1/THU
                (L1 (L) THU/RL)

=> s l1/biol
          308 L1
      7270133 BIOL/RL
L4          63 L1/BIOL
                (L1 (L) BIOL/RL)

=> s cancer? or tumor? or neoplas?
       368933 CANCER?
       508213 TUMOR?
       534285 NEOPLAS?
L5     844007 CANCER? OR TUMOR? OR NEOPLAS?

=> s l5 and l4
L6           8 L5 AND L4

=> d ibib 1-8

L6   ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2005:76283  CAPLUS
DOCUMENT NUMBER:         142:148828
TITLE:                   Cytoprotection by HIF hydroxylase inhibitors
INVENTOR(S):             Guenzler-Pukall, Volkmar; Klaus, Stephen J.; Liu,
                         David Y.; Seeley, Todd W.
PATENT ASSIGNEE(S):      Fibrogen, Inc., USA
SOURCE:                  PCT Int. Appl., 38 pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.        DATE
     ---------------      ----   --------    --------------------   --------
     WO 2005007192         A2    20050127    WO 2004-US17689        20040604
     WO 2005007192         A3    20050310
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     US 2006251638         A1    20061109    US 2005-554450         20051025
PRIORITY APPLN. INFO.:                       US 2003-476723P     P  20030606
                                             US 2003-476740P     P  20030606
                                             US 2004-554568P     P  20040319
                                             WO 2004-US17689     W  20040604

L6   ANSWER 2 OF 8  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2003:777574  CAPLUS
DOCUMENT NUMBER:         139:271039
TITLE:                   In vivo use of glutathione S-transferase-activated
                         nitric oxide donors for the treatment of
```

cancer and the multidrug resistance phenotype
INVENTOR(S): Shami, Paul
PATENT ASSIGNEE(S): The University of Utah Research Foundation, USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003080039	A1	20031002	WO 2003-US8877	20030321
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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CA 2480033	A1	20031002	CA 2003-2480033	20030321
AU 2003230715	A1	20031008	AU 2003-230715	20030321
EP 1490045	A1	20041229	EP 2003-723806	20030321
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US 2005171066	A1	20050804	US 2004-508744	20040920

PRIORITY APPLN. INFO.: US 2002-366221P P 20020321
WO 2003-US8877 W 20030321
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:507951 CAPLUS
DOCUMENT NUMBER: 135:87148
TITLE: Metal ion binding site-based method of identifying ligands of biological target molecules for drug discovery
INVENTOR(S): Elling, Christian E.; Gerlach, Lars Ole; Holst Lange, Birgitte; Pedersen, Jan Torleif; Schwartz, Thue W.
PATENT ASSIGNEE(S): 7TM Pharma, Den.
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001050127	A2	20010712	WO 2000-EP13389	20001229
WO 2001050127	A3	20020131		
WO 2001050127	A9	20020912		
WO 2001050127	A8	20040219		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2395999	A1	20010712	CA 2000-2395999	20001229
US 2002061599	A1	20020523	US 2000-752102	20001229
EP 1242824	A2	20020925	EP 2000-993741	20001229

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

WO 2002054077	A2	20020711	WO 2001-DK867	20011221

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002215888	A1	20020716	AU 2002-215888	20011221

PRIORITY APPLN. INFO.:	DK 1999-1879	A	19991230
	DK 1999-1880	A	19991230
	US 2000-175401P	P	20000111
	US 2000-175994P	P	20000111
	DK 2000-705	A	20000428
	US 2000-202990P	P	20000509
	WO 2000-EP13389	W	20001229
	DK 2001-536	A	20010330
	US 2001-280237P	P	20010330
	WO 2001-DK867	W	20011221

OTHER SOURCE(S): MARPAT 135:87148

L6 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:608618 CAPLUS
DOCUMENT NUMBER: 133:204807
TITLE: Molecules for the treatment and diagnosis of tumors
INVENTOR(S): Alberto, Roger Ariel; Schibli, Roger
PATENT ASSIGNEE(S): Mallinckrodt Inc., USA
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050086	A1	20000831	WO 2000-EP1553	20000224

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2360419	A1	20000831	CA 2000-2360419	20000224
EP 1154798	A1	20011121	EP 2000-910711	20000224
EP 1154798	B1	20060510		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY

JP 2002537360	T	20021105	JP 2000-600696		20000224
AT 325624	T	20060615	AT 2000-910711		20000224
ES 2259603	T3	20061016	ES 2000-910711		20000224
US 6844425	B1	20050118	US 2001-913788		20010815
US 2005019254	A1	20050127	US 2004-707994		20040130
PRIORITY APPLN. INFO.:			US 1999-121340P	P	19990224
			EP 1999-200754	A	19990312
			WO 2000-EP1553	W	20000224
			US 2001-913788	A1	20010815

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:246325 CAPLUS
DOCUMENT NUMBER: 133:117919
TITLE: Accumulation of porphyrins in thyroid tissue and cells induced by δ-aminolevulinic acid
AUTHOR(S): Lobanok, E. S.; Vorobei, A. V.; Rebeko, V. Ya.
CORPORATE SOURCE: Institute of Photobiology, National Academy of Sciences of Republic of Belarus, Minsk, Belarus
SOURCE: Bulletin of Experimental Biology and Medicine (Translation of Byulleten Eksperimental'noi Biologii i Meditsiny) (2000), Volume Date 1999, 128(8), 854-856
CODEN: BEXBAN; ISSN: 0007-4888
PUBLISHER: Consultants Bureau
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:180771 CAPLUS
DOCUMENT NUMBER: 128:242887
TITLE: Therapeutic formulations containing venom or venom anti-serum either alone or in combination for the therapeutic prophylaxis and therapy of neoplasms
INVENTOR(S): Shanahan-Prendergast, Elizabeth
PATENT ASSIGNEE(S): Shanahan-Prendergast, Elizabeth, Ire.
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9810776	A1	19980319	WO 1997-IB1091	19970910
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2265631	A1	19980319	CA 1997-2265631	19970910
AU 9741323	A	19980402	AU 1997-41323	19970910
AU 741943	B2	20011213		
EP 1019068	A1	20000719	EP 1997-939108	19970910
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI

US 2003175277	A1	20030918	US 1999-254623	19990708
US 2004131632	A1	20040708	US 2003-742726	20031219
US 2008044431	A1	20080221	US 2007-735025	20070413

PRIORITY APPLN. INFO.:

US 1996-25179P	P	19960911
WO 1997-IB1091	W	19970910
US 1999-254623	A1	19990708
US 2003-742726	B1	20031219

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:450109 CAPLUS
DOCUMENT NUMBER: 127:60628
TITLE: Combination therapeutic methods employing nitric oxide scavengers
INVENTOR(S): Lai, Ching-San
PATENT ASSIGNEE(S): Medinox, Inc., USA; Lai, Ching-San
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9718805	A1	19970529	WO 1996-US18124	19961112
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5747532	A	19980505	US 1995-561594	19951121
CA 2238028	A1	19970529	CA 1996-2238028	19961112
AU 9676784	A	19970611	AU 1996-76784	19961112
EP 866695	A1	19980930	EP 1996-939670	19961112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
CN 1202824	A	19981223	CN 1996-198435	19961112
CN 1096855	B	20021225		
JP 2000500493	T	20000118	JP 1997-519776	19961112
TW 516957	B	20030111	TW 1996-85114207	19961119
AU 9869984	A	19980730	AU 1998-69984	19980609
AU 722361	B2	20000803		

PRIORITY APPLN. INFO.:

US 1995-561594	A2	19951121
US 1996-12820P	P	19960305
WO 1996-US18124	W	19961112

OTHER SOURCE(S): MARPAT 127:60628

L6 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:767627 CAPLUS
DOCUMENT NUMBER: 124:21803
TITLE: Method and agents for preventing tissue injury from hypoxia
INVENTOR(S): Bursten, Stuart L.; Singer, Jack W.; Rice, Glenn C.
PATENT ASSIGNEE(S): CE Therapeutics, Inc., USA
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2

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DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  2
PATENT INFORMATION:

     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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     WO 9513075           A1    19950518    WO 1994-US12821        19941114
         W:  AU, CA, JP
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     AU 9510907           A     19950529    AU 1995-10907          19941114
     EP 728003            A1    19960828    EP 1995-901808         19941114
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE
PRIORITY APPLN. INFO.:                       US 1993-152117      A  19931112
                                             WO 1994-US12821     W  19941114
OTHER SOURCE(S):         MARPAT 124:21803


=> s antibod?
L7      517545 ANTIBOD?

=> s conjugat? or link? or couple?
        248248 CONJUGAT?
        528677 LINK?
        452566 COUPLE?
L8     1180354 CONJUGAT? OR LINK? OR COUPLE?

=> d his

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     FILE 'REGISTRY' ENTERED AT 10:34:45 ON 18 MAR 2008
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                E "PHENANTHROLINE"/CN 25
L1            1 S E3

     FILE 'CAPLUS' ENTERED AT 10:36:11 ON 18 MAR 2008
L2          308 S L1
L3           17 S L1/THU
L4           63 S L1/BIOL
L5       844007 S CANCER? OR TUMOR? OR NEOPLAS?
L6            8 S L5 AND L4
L7       517545 S ANTIBOD?
L8      1180354 S CONJUGAT? OR LINK? OR COUPLE?

=> s l8 and l6
L9            2 L8 AND L6

=> s l9 and l7
L10           0 L9 AND L7

=> s l3 and l5
L11           6 L3 AND L5

=> s l11 and l7
L12           2 L11 AND L7

=> d ibib 1-2

L12  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        1998:180771  CAPLUS
DOCUMENT NUMBER:         128:242887
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TITLE: Therapeutic formulations containing venom or venom anti-serum either alone or in combination for the therapeutic prophylaxis and therapy of neoplasms
INVENTOR(S): Shanahan-Prendergast, Elizabeth
PATENT ASSIGNEE(S): Shanahan-Prendergast, Elizabeth, Ire.
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9810776	A1	19980319	WO 1997-IB1091	19970910
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2265631	A1	19980319	CA 1997-2265631	19970910
AU 9741323	A	19980402	AU 1997-41323	19970910
AU 741943	B2	20011213		
EP 1019068	A1	20000719	EP 1997-939108	19970910
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2003175277	A1	20030918	US 1999-254623	19990708
US 2004131632	A1	20040708	US 2003-742726	20031219
US 2008044431	A1	20080221	US 2007-735025	20070413

PRIORITY APPLN. INFO.:

US 1996-25179P	P	19960911
WO 1997-IB1091	W	19970910
US 1999-254623	A1	19990708
US 2003-742726	B1	20031219

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:450109 CAPLUS
DOCUMENT NUMBER: 127:60628
TITLE: Combination therapeutic methods employing nitric oxide scavengers
INVENTOR(S): Lai, Ching-San
PATENT ASSIGNEE(S): Medinox, Inc., USA; Lai, Ching-San
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9718805	A1	19970529	WO 1996-US18124	19961112
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

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        RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
            IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
            MR, NE, SN, TD, TG
    US 5747532          A     19980505    US 1995-561594          19951121
    CA 2238028          A1    19970529    CA 1996-2238028         19961112
    AU 9676784          A     19970611    AU 1996-76784           19961112
    EP 866695           A1    19980930    EP 1996-939670          19961112
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, FI
    CN 1202824          A     19981223    CN 1996-198435          19961112
    CN 1096855          B     20021225
    JP 2000500493       T     20000118    JP 1997-519776          19961112
    TW 516957           B     20030111    TW 1996-85114207        19961119
    AU 9869984          A     19980730    AU 1998-69984           19980609
    AU 722361           B2    20000803
PRIORITY APPLN. INFO.:                      US 1995-561594      A2 19951121
                                            US 1996-12820P      P  19960305
                                            WO 1996-US18124     W  19961112
OTHER SOURCE(S):        MARPAT 127:60628


=> d ibib abs kwic 2

L12  ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:       1997:450109  CAPLUS
DOCUMENT NUMBER:        127:60628
TITLE:                  Combination therapeutic methods employing nitric oxide
                        scavengers
INVENTOR(S):            Lai, Ching-San
PATENT ASSIGNEE(S):     Medinox, Inc., USA; Lai, Ching-San
SOURCE:                 PCT Int. Appl., 62 pp.
                        CODEN: PIXXD2
DOCUMENT TYPE:          Patent
LANGUAGE:               English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

    PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
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    WO 9718805           A1    19970529    WO 1996-US18124         19961112
        W:  AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
            DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
            RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
            AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
            IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
            MR, NE, SN, TD, TG
    US 5747532          A     19980505    US 1995-561594          19951121
    CA 2238028          A1    19970529    CA 1996-2238028         19961112
    AU 9676784          A     19970611    AU 1996-76784           19961112
    EP 866695           A1    19980930    EP 1996-939670          19961112
        R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, FI
    CN 1202824          A     19981223    CN 1996-198435          19961112
    CN 1096855          B     20021225
    JP 2000500493       T     20000118    JP 1997-519776          19961112
    TW 516957           B     20030111    TW 1996-85114207        19961119
    AU 9869984          A     19980730    AU 1998-69984           19980609
    AU 722361           B2    20000803
PRIORITY APPLN. INFO.:                      US 1995-561594      A2 19951121
                                            US 1996-12820P      P  19960305
```

WO 1996-US18124 W 19961112

OTHER SOURCE(S): MARPAT 127:60628

AB Combination therapeutic methods are provided for the in vivo inactivation or inhibition of formation (either directly or indirectly) of species which induce the expression of nitric oxide synthase, as well as reducing nitric oxide levels produced as a result of NO synthase expression. In contrast to the inhibitory approach described in the prior art (i.e., wherein the function of the enzymes responsible for nitric oxide production is inhibited), the present invention employs a combination of inactivation (or inhibition) and scavenging approaches, whereby the stimulus of nitric oxide synthase expression is inactivated, or the production thereof is inhibited, and overproduced nitric oxide is bound in vivo to a suitable nitric oxide scavenger. The resulting complexes render the stimulus of nitric oxide synthase expression inactive (or inhibit the production thereof), and nitric oxide harmless. The resulting complexes are eventually excreted in the urine of the host. Also provided are compns. and formulations useful for carrying out the above methods.

IT Interleukin 6
Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibodies to; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

IT Antibodies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(monoclonal, OKT3; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

IT Antibiotics
Antibodies
Corticosteroids, biological studies
Interleukin 10
Interleukin 13
Interleukin 4
Metalloporphyrins
Porphyrins
Prostaglandins
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

IT CD14 (antigen)
Tumor necrosis factor receptors
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(soluble; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

IT Interferons
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(γ, antibodies to; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

IT 9001-30-3, Blood coagulation factor XII 80295-54-1, Complement C5a
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibodies to; nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

IT 50-02-2 50-24-8, Prednisolone 50-33-9, Phenylbutazone, biological studies 50-44-2, 6-Mercaptopurine 50-78-2, Aspirin 53-86-1, Indomethacin 59-66-5, Acetazolamide 70-51-9, Desferrioxamine 79-17-4, Aminoguanidine 83-43-2, Methylprednisolone 89-57-6, Mesalamine 92-13-7, Pilocarpine 443-48-1, Metronidazole 446-86-6,

Azathioprine 512-15-2, Cyclopentolate 594-07-0D, Dithiocarbamic acid, dithiocarbamates 599-79-1, Sulfasalazine 737-86-0, Pyridoxal isonicotinoyl hydrazone 867-44-7 1404-26-8, Polymyxin B 2418-14-6, Dimercaptosuccinic acid 4428-95-9, Foscarnet 7439-89-6D, Iron, dithiocarbamate complexes, biological studies 7439-96-5D, Manganese, dithiocarbamate complexes, biological studies 7440-48-4D, Cobalt, dithiocarbamate complexes, biological studies 7440-50-8D, Copper, dithiocarbamate complexes, biological studies 9004-10-8, Insulin, biological studies 12678-01-2, Phenanthroline 22664-55-7, Metipranolol 24280-93-1, Mycophenolic acid 24584-09-6, ICRF-187 26839-75-8, Timolol 30652-11-0, 1,2-Dimethyl-3-hydroxypyrid-4-one 47141-42-4, Levobunolol 53774-63-3 53882-12-5, Lodoxamide 73384-59-5, Ceftriaxone 79217-60-0, Cyclosporin 82410-32-0, Ganciclovir 94161-07-6, N-Methyl-D-glucamine dithiocarbamate 94161-07-6D, N-Methyl-D-glucamine dithiocarbamate, iron complexes 104987-11-3, FK506 106602-62-4, Amylin 160525-37-1
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(nitric oxide-scavenging and nitric oxide synthase-inhibiting combinations for therapeutic use)

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=> file pctfull
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      37.81      46.09

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -0.80      -0.80

FILE 'PCTFULL' ENTERED AT 10:40:25 ON 18 MAR 2008
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FILE LAST UPDATED:         18 MAR 2008      <20080318/UP>
MOST RECENT UPDATE WEEK:       200811        <200811/EW>
FILE COVERS 1978 TO DATE

>>> IMAGES ARE AVAILABLE ONLINE AND FOR EMAIL-PRINTS <<<

=> s phenanthroline
          4193 PHENANTHROLINE
           255 PHENANTHROLINES
L13       4276 PHENANTHROLINE
                (PHENANTHROLINE OR PHENANTHROLINES)

=> s cancer? or tumor? or neoplas?
         97231 CANCER?
         80395 TUMOR?
         28172 NEOPLAS?
L14     120455 CANCER? OR TUMOR? OR NEOPLAS?

=> s conjugat? or link? or coupl?
         92667 CONJUGAT?
        371556 LINK?
        415111 COUPL?
L15     629014 CONJUGAT? OR LINK? OR COUPL?

=> s antibod?
L16     106649 ANTIBOD?
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=> s l13 and l14
L17       1886 L13 AND L14

=> s l13/clm
L18        576 (PHENANTHROLINE/CLM)

=> s l18 and l14
L19        166 L18 AND L14

=> s l14/clm
         28917 CANCER?/CLM
         18702 TUMOR?/CLM
          4631 NEOPLAS?/CLM
L20      40110 (CANCER?/CLM OR TUMOR?/CLM OR NEOPLAS?/CLM)

=> s l20 and l18
L21         84 L20 AND L18

=> s l15/clm
         15782 CONJUGAT?/CLM
         99884 LINK?/CLM
        166801 COUPL?/CLM
L22     256226 (CONJUGAT?/CLM OR LINK?/CLM OR COUPL?/CLM)

=> s l22 and l21
L23         41 L22 AND L21

=> s l16/clm
L24      40096 (ANTIBOD?/CLM)

=> s l24 and l23
L25         25 L24 AND L23

=> s l25 not py>1999
        949640 PY>1999
L26          2 L25 NOT PY>1999

=> d ibib 1-2

L26    ANSWER 1 OF 2     PCTFULL   COPYRIGHT 2008 Univentio on STN
ACCESSION NUMBER:       1996029417 PCTFULL  ED 20020514
TITLE (ENGLISH):        IL-13 RECEPTOR SPECIFIC CHIMERIC PROTEINS AND USES
                        THEREOF
TITLE (FRENCH):         PROTEINES CHIMERES SPECIFIQUES DU RECEPTEUR IL-13 ET
                        UTILISATION DE CES DERNIERES
INVENTOR(S):            PURI, Raj, K.;
                        DEBINSKI, Waldemar;
                        PASTAN, Ira;
                        OBIRI, Nicholas
PATENT ASSIGNEE(S):     THE GOVERNMENT OF THE UNITED STATES OF AMERICA,
                        represented by THE SECRETARY, DEPARTMENT OF HEALTH AND
                        HUMAN SERVICES;
                        PURI, Raj, K.;
                        DEBINSKI, Waldemar;
                        PASTAN, Ira;
                        OBIRI, Nicholas
LANGUAGE OF PUBL.:      English
DOCUMENT TYPE:          Patent
PATENT INFORMATION:
                        NUMBER             KIND     DATE
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                        WO 9629417           A1 19960926
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DESIGNATED STATES
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

PRIORITY INFO.: US 1995-8/404,685 19950315
APPLICATION INFO.: WO 1996-US3486 A 19960315

L26 ANSWER 2 OF 2 PCTFULL COPYRIGHT 2008 Univentio on STN
ACCESSION NUMBER: 1993024634 PCTFULL ED 20020513
TITLE (ENGLISH): DIPEPTIDYL PEPTIDASE-I, CLONING IT, AND THERAPEUTIC AGENTS CONTAINING INHIBITORS THEREOF
TITLE (FRENCH): DIPEPTIDYLE PEPTIDASE-I, SON CLONAGE ET AGENTS THERAPEUTIQUES CONTENANT DES INHIBITEURS DE CETTE SUBSTANCE
INVENTOR(S): THIELE, Dwain, L.;
LIPSKY, Peter, E.;
McGUIRE, Michael, J.
PATENT ASSIGNEE(S): BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM;
THIELE, Dwain, L.;
LIPSKY, Peter, E.;
McGUIRE, Michael, J.
LANGUAGE OF PUBL.: English
DOCUMENT TYPE: Patent
PATENT INFORMATION:

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WO 9324634	A1	19931209

DESIGNATED STATES
W: AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

PRIORITY INFO.: US 1992-7/890,422 19920529
APPLICATION INFO.: WO 1993-US5093 A 19930528

=> d ibib abs kwic 1-2

L26 ANSWER 1 OF 2 PCTFULL COPYRIGHT 2008 Univentio on STN
ACCESSION NUMBER: 1996029417 PCTFULL ED 20020514
TITLE (ENGLISH): IL-13 RECEPTOR SPECIFIC CHIMERIC PROTEINS AND USES THEREOF
TITLE (FRENCH): PROTEINES CHIMERES SPECIFIQUES DU RECEPTEUR IL-13 ET UTILISATION DE CES DERNIERES
INVENTOR(S): PURI, Raj, K.;
DEBINSKI, Waldemar;
PASTAN, Ira;
OBIRI, Nicholas
PATENT ASSIGNEE(S): THE GOVERNMENT OF THE UNITED STATES OF AMERICA, represented by THE SECRETARY, DEPARTMENT OF HEALTH AND HUMAN SERVICES;
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NUMBER	KIND	DATE

	WO 9629417 A1 19960926
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PRIORITY INFO.:	US 1995-8/404,685 19950315
APPLICATION INFO.:	WO 1996-US3486 A 19960315

ABEN The present invention provides a method and compositions for specifically delivering an effector molecule to a tumor cell. The method involves providing a chimeric molecule that comprises an effector molecule attached to a targeting molecule that specifically binds an IL-13 receptor and contacting a tumor cell with the chimeric molecule.

ABFR L'invention a pour objet un procede et des compositions pour administrer une molecule effectrice a une cellule tumorale. Ce procede consiste a fournir une molecule chimere qui comprend une molecule effectrice fixee a une molecule cible qui se lie, de maniere specifique, au recepteur IL-13 et a amener une cellule tumorale en contact avec la molecule chimere.

CLMEN. . . of.the radiolabeled cytokines was estimated to range from 20 - 100 yCi/gg protein. For binding experiments, typically, IX106 renal cell carcinoma (RCC) tumor cells were incubated at 4'C for 2 hours with 121 I-IL-13 (100 pM) with or without increasing concentrations (up to 500. . . IL-13 receptor expression ranging from 15 to about 500 fold as compared to normal immune cells. In contrast, IL-4 receptors overexpressed on cancers have been reported at concentrations as high as 4000 sites per cell. Scatchard analyses (Scatchard, Ann. N. Y. Aca4d. Sci., 51:. . . . . or 'I-IL-4 in the presence or absence of excess IL-13 or IL-4 for 2 h at 4'C. The bound ligand was cross- linked to its receptor with disuccinimidyl suberate (DSS) (Pierce, Rockford, Illinois, USA) at a final concentration of 2 mM for 30 min.. . . Triton X- 100, 1 mM phenylmethylsulfonyl fluoride, 0.02 mM leupeptin, 5.0 12 M trypsin inhibitor, 10 rnM benzamidine HCI, I mM phenanthroline iodoacetarnide, 50 rnM amino caproic acid, 10 uglml pepstatin, and 10 Azglml aprotinin. The cell lysates were cleared by boiling in buffer. . . lysate overnight at 4'C by incubating with protein A sepharose beads that had been pre-incubated with P7 anti hIL- 4R or anti-y. antibody and analyzed as above. The labeled 'I-IL-13 cross-linked to one major protein on all four RCC cell lines and the complex migrated as a single broad band ranging between. . . molecular mass of IL-13 (12 kDa), the size of IL-13 binding protein was estimated at 56 to 68 kDa.

The 1211_IL- 13
cross-linked band was not observed when the crosslinking was performed in the presence
of 200-fold molar excess of IL In addition to. . . on the other hand competed for I-I L-4 binding to both major proteins on WS-RCC cells. It is of interest
that 125I-IL cross-linked protein was slightly larger in size in TF-LJ61, WS-RCC,
PM-RCC, and HL-RCC cell lines compared to that seen in MA-RCC. Post-translational
modifications,. . . site.
The NdeI/Hindlll fragment containing encoding hIL-13 was subc1oned into a vector obtained by digestion of plasmid pWDMH4-38QQR (Debinski et al. Int. J.
Cancer 58: 744-748 (1994)) or plasmid pSGC242FdNI (Debinski et al. Clin. Res. 42:
251 A, (abstr.) (1994) with NdeI and HindIll, to. . . before the chimeric toxin addition. Data were obtained
from the average of duplicates and the assays were repeated several times.
Several established cancer cell lines were tested to determine if hIL
PE38QQR is cytotoxic to them. In particular, cancers derived from colon, skin and
stomach were examined. The cancer cells were sensitive to hIL PE38QQR with
ID50s ranging from less than I ng/ml to 300 ng/ml (20 pM to 6.0. . . specific as it was blocked
by a 10-fold excess of hIL-13 on all cells. These data suggest that a spectrum of human
cancer cells possess hIL-13 binding sites and such cells are sensitive to hIL
PE38QQR chimeric toxin.
Because the ML- 13R has been. . . same binding site, the cells were also treated with the hIL based
recombinant toxin, hIL PE38QQR (Debinski et al. Int. J. Cancer 8: 744-748 (1994)).
The cytotoxic action of hIL PE38QQR had already been shown to be blocked by an
excess of hIL-4 but. . . (ii)
TGFa-PE40, and (iii) a recombinant immunotoxin C242rF(ab')-PE38QQR (Debinski et
al. Clin. Res. 42, 25 1 A, (Abstr.) (1994)). C242rF(ab')-PE38QQR binds a tumor-
associated antigen that is a sialylated glycoprotein (Debinski et al. J. Clin. Invest. 90:
405-411 (1992)). The expected cytotoxic actions of these. . . in a dose-dependent manner by hIL-4 alone, or by a ADP-ribosylation
deficient chimeric toxin containing hIL-4 (Debinski et al., Int. J. Cancer 58: 744-748
(1994)). This effect of hIL-4 or enzymatically deficient chimeric toxin can be best seen
with a prolonged time of incubation. . . determined. The interaction between the IL-13 receptor and the IL-4
receptor was evaluated by examining the effect of anti-IL-4 and anti-IL-4R antibodies on
IL-13 binding to RCC cells and the IL-13 modulation of RCC cell proliferation.
1) Inhohition af RCC' MI gyrowth hy 11,11-
Renal. . . I 000 ng/ml) were
added and incubation continued for an additional 72 h. Some cultures were concurrently

treated with anti-IL-4 or anti-IL-4R antibody (1-10 yg/ml). ['H]-thymidine (I 'UO/well) was added for the final 20 h of incubation. At the end of the incubation, cells. . . form of IL-4 inhibited IL-13 and IL-4 effects (Zurawski et al., EMBO J., 12: 2663 (1993))), the ability of anti-IL-4 or anti-IL-4R antibody to block both IL-4 and IL-13 growth inhibitory effects was determined.

For this experiment, WS-RCC cells were treated with IL-13 or IL-4 alone, or in the presence of a neutralizing polyclonal antibody to hIL-4 or a monoclonal antibody to IL-4R (M57). This approach was chosen because a suitable anti-hIL-13 was not readily available. [2 H]-thymidine uptake was significantly inhibited ($p<0.05$). . . (22621+210 cpm in treated vs 3222+458 cpm in control). While the IL mediated inhibition of proliferation was abrogated by a polyclonal anti-IL-4 antibody, the inhibitory effect of IL-13 was not affected by the addition of anti-IL-4 antibody. Furthermore, the anti-proliferative effect of IL-4 was also abrogated by M57, a monoclonal antibody against IL-4R, but the antiproliferative effect of IL- 13 was not affected by this antibody.

When WS-RCC cells were treated with a combination of IL-4 and IL-13, the resulting inhibition of cellular proliferation was not significantly different. . . using the two cytokines together.

2) Inhilhifinn nf RCC calinny ffirmatinn hy H,

To confirm the observed IL-13 mediated inhibition of RCC tumor cell proliferation, a colony formation assay was used to evaluate the effect of IL-13 on RCC cell growth. Five hundred RCC cells. . . the inhibition of IL-4 binding by IL-13 and to evaluate the fidelity of ligand binding by IL-13R, the effect of anti-IL-4R antibody on 1211-IL-13 binding to PM-RCC cells, which express both IL-4R and IL-13R, was examined. As a control, the effect of this antibody on 1211 -IL-4 binding to PM-RCC cells was also tested.

Recombinant human IL-4 and IL-13 were labeled with 1251 (Amersham Corp.) by using. . . a buffered medium alone or in the presence of excess cytokine (128 nM); monoclonal (M57) or polyclonal (P2, P39 P7) rabbit antibodies raised against human IL-4R. The antibodies were used at a final dilution of 1:64. The incubation was done at VC for 2 h in a shaking water. . . cpm and 9,263±576 cpm respectively). Unlabeled IL-13 competed well for 121 I-IL-13 binding, however, neither IL-4 nor any of three different polyclonal antibodies to IL-4R competed for the binding of 1211-IL-13 on PM-RCC cells. Similarly, a monoclonal antibody to IL-4R (M57) did not block the binding of 121 I-IL-13 to PM-RCC cells. In contrast, IL-4, IL-13 and anti-IL-4R antibody (P7) all competed for

'25I-IL-4 binding on these cells.
This Example demonstrates that IL-13 inhibits the proliferation of human RCC cells in a. . . lines. Although a similar magnitude of growth inhibition has been reported for IL-4, this is the first report of a direct anti-tumor effect of IL-13 on RCC cells. Furthermore, inhibitory effects of IL-4 on colony forn. ation in RCC cells have not been previously. . . of IL-13 were independent of IL-4 and did not involve IL-4R. This is evidenced by the fact that polyclonal or monoclonal antibodies to IL-4 or to the 140 kDa subunit of IL-4R had no effect on the growth inhibitory effect of IL- 13. As. . . cells in vitro by 30% (Renard et al., Blood, 84: 2253-(1994)).
This growth inhibitory effect of IL-13 was abrogated by an antibody to the 140 kDa subunit of IL-4R. Similarly, the growth stimulatory effect of IL-13 on TF- I cells was also shown to be blocked by an antibody to IL-4R (e.g., Tony et al., Europ. J. Biochem., 225: 659 (1994)). However, in this study, none of 3 different antibodies to IL-4R blocked the growth inhibitory effect of IL These contrasting findings may suggest that the antibodies used in this study and those used by others are directed at different epitopes on the IL-4R protein. An alternative explanation,. . . identified. These include the absence of the common gamma chain of the receptors for IL-2, 4, 7, 9, and 15 in tumor cell IL-4R, although this chain is present in IL-4R of immune cells (Obiri et al. Oncol. Res., 6: 419 (1994)).
Previous studies have demonstrated that antibodies to IL-4R block cellular responsiveness to IL- 13 (Tony et al., Europ. J. Biochem. . 225: 659 (1994)). However, the effect of these antibodies on the binding of 121 I-IL-13 to the cells was not investigated. We report here that the binding of radio-labeled IL-13 to its receptors on RCC cells could not be blocked by a polyclonal antibody to IL-4R which did block the binding of radio-labeled IL-4 to its receptors. These data suggest that in RCC cells, IL-13 interaction. . . and competes for IL-4 binding but IL-4 did does compete for IL- 13 binding in RCC cells. In addition, IL-4 cross links to a '70 kDa protein in addition to its primary 140 kDa binding protein. Taken together, these data suggest that the. . . finding that IL-13 competes for '251-IL-4 binding while IIL-4 does not compete for 121 I-IL-13 binding on these cells. Finally, since antibody to IL-4R did not block IL-13 binding, and 12II-IL-13 cross linking to the p140 form of the IL-4R was not detected, in RCC cells, IL-13 does not appear to utilize the 140. . . cell types.
In summary, IL-13, like IL-4 directly inhibits RCC proliferation in vitro. The IL-13 effect is independent of IL-4 since anti-IL-4R antibody did not inhibit IL-13

binding to its receptor and anti-IL-4R antibody did not inhibit the IL-13 effect on RCC cells. These findings suggest that IL-13R directed chimeric molecules are particularly useful for the. . . Cells hy Rpeornh*n.qnt ILe PE, Cyt toxins 1) Qdotnxicity of TI.-13A-oxin-fusion-protein. The cytotoxic activity of IL4-toxins was tested as described above. Typically, 10' RCC tumor cells or other cells were cultured in leucine-free medium with or without various concentrations of IL-toxin for 20-22 hours at 37C.. . . cells are killed by IL13-PE38QQR at uniquely low concentrations of the chimeric protein.

Table 2. Cytotoxic activity of IL13-PE38QQR on human RCC tumor cell lines.

Tumors	IC50 (ng/ml)' mean ± SD	IL-13 binding sites/cell	Reference No.
HL-RCC	0.039 < 0.1	1509000	13
PM-RCC	0.090 + 0.01	269500	13
MA-RCC	0.340. . .		

inhibition of protein synthesis is observed compared to untreated cells and was determined as described under methods.

The mean 'C50 for individual tumors is shown and was determined from 2-5 experiments for four RCC tumor cell lines.

'Single experiment performed in quadruplicate using 5 different concentration of 11,13-toxin.

C current data

1) CarrPlation hptwppn 11,13R PxprP_rq*nn and gensitivity. . . IL-13 ranged between 44 to 128pCi/jAg. The IL-13 binding assay was performed by as described above (see Example 1). Briefly, RCC tumor cells were harvested after brief incubation with versene (Biowhittaker), washed three times in Hanks balanced salt solution and resuspended in binding buffer. . . to 11,13-toxe

In order to determine the antitumor activity of ILI 3-toxin against human RCC, human RCC cells were grown as subcutaneous tumors in nude mice, irradiated (300 rads) nude mice and in SCID mice. However, these RCC cells did not grow consistently in any of these immunoincompetent mice. In some cases tumors did grow very slowly but became centrally necrotic with a white rim of viable RCC cells.

Therefore, antitumor activity of IL13 toxin was not evaluated in vivo. However, MA-RCC were passaged in nude mice and the passaged tumors were used to prepare single cell suspensions. These cells did grow in tissue culture and after 1-3 passages, their sensitivity to IL13-toxin. . . twice did not decrease their sensitivity. These data suggest that IL-13R levels do not change by in vivo passaging of RCC tumor cells.

]%]] .. 4 I an is not ryintoxic to immune rells, monaryles, honp marrow-dPr*yPd rplls.. sand Burkitt'.q lym harna MI&

The. . . competed for the binding sites of IL-4 while IL-4 did not compete for the binding site of IL However, in other cancer cell types IL-4 neutralized the

cytotoxicity mediated by IL13-PE38QQR. The ability of IL-4 to neutralize the
cytotoxicity of IL13-toxin on RCC cells. . .
. . .
carcinoma cell lines.
Recent data demonstrate that both IL-4 and IL-13 caused the phosphorylation of 140 kDa
IL-4 binding protein. In addition, antibody to 140 kDa IL-4 binding protein blocked the
effects of IL-13 on B cells. While these studies, suggest that the 140.
. . molecule in which the toxin moiety is
attached at a site away from the C-terminus residues should be more cytotoxic to cancer
cells.
In summary, these results indicate that IL13-toxin IL13-PE38QQR is highly cytotoxic to human RCC cells which express high numbers of IL-13R.. . . and Are Extremely Sensitive t
TI-13PF. Chimpr*r Protpon-ri
In order to evaluate the efficacy of the chimeric immunotoxins of this invention on brain tumors, cytotoxicity (as evaluated by inhibition of protein synthesis)
and competitive inhibition assays were performed on a number of brain tumor cell lines
as described below.
1) Prntpon synthEb-sis inhibition sissay,
The cytotoxic activity of chimeric toxins (e.g., hIL13-PE38QQR) was tested on brain tumor cell lines. This group of cells is represented by human gliornas
and includes U-373 MG, DBTRG-05 MG, A-172, Hs 683, U-251. . .
. . .
from the ATCC and they were maintained under conditions recommended by the ATCC. The SNB-19 cell line was obtained from National Cancer
Institute/Frederick Cancer Research Facility, DCT tumor repository. Both SNB-19 and
SW-1088 cell lines are of neuroglial origins.
Usually about I x 104 cells/well were plated in a 24-well. . . the addition of chimeric toxins (CTs). Data were
obtained from the average of duplicates and the assays were repeated several times.
The cancer cells were sensitive to hIL13-PE38QQR with IC,(s ranging
from less than 0. I ng/ml to more than 300 ng/nil (2 pM. . .
represented by T-98G and SW 1088 had poorer responses with IC50S of 300 and > 1000 ng/ml, respectively. The only human cancer cell line of neural origin
tested, the SK-N-MC neuroblastoma cell line, responded relatively poor to the chimeric
toxin.
The cytotoxic action of hIL13-PE38QQR. . . blocked
by a 10- or 100-fold excess of hIL13 on the studied cells. These data indicate that most
of the human glioma cancer cells examined possess hIL13 binding sites and such cells
are extremely sensitive to hIL13-PE38QQR.
2) C-3datox*c qrt*v*ti of other cytakine-haspd chimpric 11rotping. . . been
shown that some glioma cell lines can be killed by hIL4-PE4E with IC50s exceeding 10
ng/ml (Puri et al. Int. J. Cancer, 58: 574-581 (1994)) .
HIL13-
PE38QQR was cytotoxic to U-251 MG, U-373 MG and DBTRG MG cell lines with

IC50s much below. . . the hIL4-
PE4E variant of the chimeric toxin (Debinski, et al. J. Biol. Chem., 268: 14065-14070
(1993), Puri et al. Int. J. Cancer, 58: 574-581 (1994)) which is consistent with
observations made with other growth factor-based chimeric proteins (Slegall et al.
Cancer Res., 51: 2831-2836 (199 1)). Interestingly, hIL6-PE40 was also active on some
human glioma cells and its activity was similar to. . . considerably better than that
of other interleukin-based chimeric toxins.
3) r-ampefifiVe h.*ndin.
The previous examples demonstrated that the action of hIL13-PE38QQR on several solid tumor cell lines is hIL13- and hIL4-specific, i.e., it can be blocked by
these two cytokines but not by IL2. However, it. . . al. J. Biol. Chem., 270: 8797-8804 (1995))
and it cannot block the cytotoxic action of the hIL13-based chimeric protein on some
other cancer cell lines. Thus, the ability of hIlA to block the IL13-toxin cytotoxin in
glial cells was determined.
The hIL4 cytokine was ineffective. . . of the radiolabeled cytokines was estimated to range from 20 to 100 IACilyg of protein. For binding
experiments, typically I X 106 tumor cells were incubated at 4cC for 2 h with 121 1-hIL 1 3
(100 pM) with or without increasing concentrations (up. . . hIL13-PE38QQR on
these cells. Thus, the receptors for hIL13 and hILA in glioma cells are different from
those found in several solid tumor cell lines.
The hIL13-PE38QQR cytotoxin is considerably more active on glioma cell lines than the comparable ILA-based chimeric toxin. This difference in. . . IL4 per cell. Interestingly, some human glioma cells can also be killed
by a chimeric toxin containing hIL6 (Siegall et al., Cancer Res., 51: 2831-2836 (1991)).
However, the potency of hIL6-PE40 chimeric protein is lower from that of hIL13-
PE38QQR.
FX2 ple-9
CWmpr*c Toxins HaAng-Incren ed-Cy-totoxicity
Two. . . additional amino acids (GlyGlySerGly) are located in between the residues 114 and I of the wild type hIL13. Circularly permuted hIL13 was
linked to the first amino acid of PE38QQR. The cphIL PE38QQR was expressed in
E. coli and purified to homogeneity.
Both hIL PE4E. . . 11A 3R Directed Cyf ntnxinx an Neum) Cnnrpr4,q
The cytotoxicity of two chimeric toxins (hIL PE38QQR and hIL-13PE4E) was tested on cancer cell lines of neural origins. The DAOY, TE671, and
D283 medulloblastorna cell lines were all responsive to hIL-13 fused to PE4E.. . . suggest that the overexpression
of a receptor for hIL-13 is not restricted to gliornas, but it can be observed in neuron-
derived cancers.
IL-13R Targyptpd CVtotaxins are EffPctive Apskinst Knpago's Sarmnask
The recombinant immunotoxin IL PE38QQR was also tested against Kaposi's sarcoma cell lines (NCB59, KS248,. . . hereby incorporated

by reference for all
purposes.
WHAT IS CLADAED IS:
I 1. A method for specifically delivering an effector molecule to a
tumor
cell bearing an IL-13 receptor, said method comprising:
providing a chimeric molecule comprising said effector molecule
attached to a targeting molecule that specifically binds to an IL-13
receptor; and
contacting said tumor with said chimeric molecule;
wherein said chimeric molecule specifically binds to a tumor
cell.

3 The method of claim 1, wherein said targeting molecule is an
anti-IL-13 receptor antibody.

5 The method of claim 1, wherein said tumor is selected from
the
group consisting of a carcinoma.

6 The method of claim 1, wherein said tumor is selected from
the
group consisting of a renal cell carcinoma, a gliorna, a
medulloblastorna, a renal cell
carcinoma, and a Kaposi's. . . molecule is selected
from the group consisting of a cytotoxin, a label, a radionuclide, a
drug, a liposome, a
ligand, and an antibody.

14 A method for impairing growth of tumor cells bearing an
IL-13
receptor, said method comprising contacting said tumor with a
chimeric molecule
comprising:
a targeting molecule that specifically binds a human IL-13 receptor; and
an effector molecule selected from the group consisting of a cytotoxin,
a
radionuclide, a ligand and an antibody;
wherein said chimeric molecule specifically binds to a tumor
cell.

15 The method of claim 14, wherein said targeting molecule is an
antibody that specifically binds a human IL-13 receptor.

24 The method of claim 16, 17, wherein said tumor cell growth
is
tumor cell growth in a human.

26 A method for detecting the presence or absence of a tumor,
said
method comprising contacting said tumor with a chimeric
molecule comprising:
a targeting molecule that specifically binds a human IL-13 receptor; and
a detectable label; and
detecting the presence. . . protein comprising an IL-13 or circularly
permuted IL-13 attached to a
polypeptide wherein said chimeric fusion protein specifically binds to a
tumor cell
bearing an IL-13 receptor.

. . .
comprising an IL-13 or a circularly permuted IL-13 attached to a
polypeptide wherein said chimeric fusion protein specifically binds to a

tumor cell
bearing an IL-13 receptor.

34 A chimeric molecule that specifically binds a tumor cell bearing an
IL-13 receptor, said chimeric molecule comprising a cytotoxic molecule attached to a
targeting molecule that specifically binds an IL-13. . .

40 A chimeric molecule that specifically binds a tumor cell bearing an
IIL-13 receptor, said chimeric molecule comprising an effector molecule attached to an
antibody that specifically binds an IL-13 receptor.
. . .
molecule is
selected from the group consisting of a cytotoxin, a label, a radionuclide, a drug, a
liposome, a ligand, and an antibody.
. . .
molecule is
selected from the group consisting of a cytotoxin, a label, a radionuclide, a drug, a
liposome, a ligand, and an antibody.

L26 ANSWER 2 OF 2 PCTFULL COPYRIGHT 2008 Univentio on STN
ACCESSION NUMBER: 1993024634 PCTFULL ED 20020513
TITLE (ENGLISH): DIPEPTIDYL PEPTIDASE-I, CLONING IT, AND THERAPEUTIC AGENTS CONTAINING INHIBITORS THEREOF
TITLE (FRENCH): DIPEPTIDYLE PEPTIDASE-I, SON CLONAGE ET AGENTS THERAPEUTIQUES CONTENANT DES INHIBITEURS DE CETTE SUBSTANCE
INVENTOR(S): THIELE, Dwain, L.;
LIPSKY, Peter, E.;
McGUIRE, Michael, J.
PATENT ASSIGNEE(S): BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM;
THIELE, Dwain, L.;
LIPSKY, Peter, E.;
McGUIRE, Michael, J.
LANGUAGE OF PUBL.: English
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PRIORITY INFO.: US 1992-7/890,422 19920529
APPLICATION INFO.: WO 1993-US5093 A 19930528
ABEN Therapeutic agents and methods for the treatment of immunologically mediated diseases and
malignancies of myeloid cell or lymphoid cell origin. These particular methods utilize the
characterization of particular activation mechanisms important to the progression of these
pathologies in humans. Selective inhibition of cell types responsible for precipitating these
disorders in humans are provided with therapeutic agents which include peptides capable of

inhibiting dipeptidyl peptidase-I activation of proenzymes present primarily in cytotoxic T-cells
and myeloid cells, such as Gly-Phe-CHN2. Antisense oligonucleotides are also characterized which are
specific for human dipeptidyl peptidase-I gene which may be used in the treatment of the described
disorders.

ABFR Agents therapeutiques et procedes de traitement de maladies a mediation immunologique et
d'affections malignes originaires des cellules myeloides ou lymphoides. Ces procedes particuliers
utilisent la caracterisation de mecanismes d'activation particuliers jouant un role important dans
la progression de ces etats pathologiques chez l'homme. L'inhibition selective de certains types de
cellules responsables de ces affections chez l'homme est obtenue a l'aide d'agents therapeutiques
comprenant des peptides pouvant inhiber l'activation par la dipeptidyle peptidase-I de proenzymes,
telle Gly-Phe-CHN2, presentes principalement dans les lymphocytes T cytotoxiques et dans les
cellules myeloides. Sont egalement caracterises des oligonucleotides antisens, qui sont specifiques
du gene humain de dipeptidyle peptidase-I et qui peuvent etre utilises dans le traitement des
affections susmentionnees.

CLMEN. . . of Protease Inhibitors on DPPI ActiyLt
]y
Inhibitor Concentration Percentage
control activity
PMSF 1 mm 98
TLCK I mm 5
TPCK 1 mm 10
1110- 1 mm 98
Phenanthroline
Bestatin 500 Ag/Ml 103
Cystatin 50 AgIml 32
N-Ethylmaleimide 1 mm 63
Gly-Phe- 20 jiM 12
diazomethane
Iodoacetic acid 1 mm 10
Mersalyl acid 1 mm 3
2121-. . .

. . .
no viable cells recovered at
the end of 4 days of culture with Gly-Phe-CHN2 (see Figure
5).
In contrast, proliferation of another myeloid tumor
cell line, THP-1, was not affected by incubation with an
identical concentration of the DPPI inhibitor.
Cell division in the relatively undifferentiated
myeloid cell. . . the DPPI inhibitor is also consistent with the
proposed role of DPPI in the processing and activation of
the myeloblastin, as myeloid tumor cells cultured with
antisense oligonucleotides to inhibit myeloblastin
synthesis undergo similar differentiation.
Of note, only partial inhibition of serine protease
activity in the U-937. . .

. . .
active, mature protease by aprotinin-
agarose affinity chromatography. Both active and

inactive forms of cathepsin G were further purified by immunoaffinity using specific antibodies adsorbed to protein A-Sepharose. At the end of the 4 hour chase period, cells exposed to the DPPI inhibitor (Gly-Phe-CHN2) had accumulated less. . .

. . .

compared
to the activity of spleen DPPI by determining subcellular localization, substrate and inhibitor specificity, chromatographic and electrophoretic behavior and antigenic identity.

Preparation of anti-DPPI antibodies

Antibodies to human DPPI will be produced in rabbits. Since it is difficult to purify large amounts of DPPI from human spleen, alternate. . . DPPI have been short and predominantly hydrophobic (Table 4). Once identified, the most suitable peptide sequence would be prepared by chemical synthesis and cross-linked to a carrier protein for immunizing rabbits.

PROPHETIC EXAMPLE 12

PREPARATION OF ANTISENSE OLIGONUCLEOTIDES FOR INHIBITION OF EXPRESSION OF DPPI GENE

The present example is. . . reference for the purpose. In general, there are two commonly used solid phase-based approaches to the synthesis of oligonucleotides containing conventional 51-3f linkages, one involving intermediate phosphoramidites and the other involving intermediate phosphonate linkages. In the phosphoramidite synthesis a suitably protected nucleotide having a cyanoethylphosphoramidate at the position to be coupled is reacted with the free hydroxyl of a growing nucleotide chain derivatized to a solid support. The reaction yields a cyanoethylphosphite, which linkage must be oxidized to the cyanoethylphosphate at each intermediate step, since the reduced form is unstable to acid.

The phosphonate based synthesis is conducted by the reaction of a suitably protected nucleotide containing a phosphonate moiety at a position to be coupled with a solid Dhase-derivatized nuclectide chain having a free hydroxyl group, in the presence of a suitable activator to obtain a phosphonate diester linkage, which is stable to acid. Thus, the oxidation to the phosphate or thiophosphate can be conducted at any point during synthesis of the. . . or absence of canine pancreatic membranes. The protein product will then be assayed for enzymatic activity and for reactivity with a specific anti-DPPI antibody.

Culture of Myeloid Cells with Antisense Oligonucleotides

Synthetic oligonucleotides will be prepared with sequences that are complementary to the DPPI sense RNA strand as. . . independent of nuclear degradation, additional 1-4 hour assays will utilize 51Cr labeled TNP-modified SREC as targets of cytotoxicity triggered by anti-CD3/anti-TNP heteroconjugated antibodies as previously described.51

Where capacity for SRBC lysis is found to be significantly impaired in CTL generated under culture conditions in which]levels of perforin. . .

22 A cancer chemotherapeutic agent for the treatment of a malignancy of myeloid cell or cytotoxic lymphocyte

origin, said agent comprising an oligonucleotide capable of inhibiting. . .

23 A cancer chemotherapeutic agent for the treatment of malignacies of myeloid cell or cytotoxic lymphoid origin comprising a proteses inhibitor.

24 The cancer chemotherapeutic agent of claim 22 further defined as an antisense oligonucleotide which -134 - includes a sequence complementary to the messenger RNA for human. . .

25 The cancer chemotherapeutic agent of claim 22 wherein the malignancy is defined as leukemia.

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=> d his

     (FILE 'HOME' ENTERED AT 10:34:16 ON 18 MAR 2008)

     FILE 'REGISTRY' ENTERED AT 10:34:45 ON 18 MAR 2008
                E "PHENANTROLINE"/CN 25
                E "PHENANTHROLINE"/CN 25
L1            1 S E3

     FILE 'CAPLUS' ENTERED AT 10:36:11 ON 18 MAR 2008
L2          308 S L1
L3           17 S L1/THU
L4           63 S L1/BIOL
L5       844007 S CANCER? OR TUMOR? OR NEOPLAS?
L6            8 S L5 AND L4
L7       517545 S ANTIBOD?
L8      1180354 S CONJUGAT? OR LINK? OR COUPLE?
L9            2 S L8 AND L6
L10           0 S L9 AND L7
L11           6 S L3 AND L5
L12           2 S L11 AND L7

     FILE 'PCTFULL' ENTERED AT 10:40:25 ON 18 MAR 2008
L13        4276 S PHENANTHROLINE
L14      120455 S CANCER? OR TUMOR? OR NEOPLAS?
L15      629014 S CONJUGAT? OR LINK? OR COUPL?
L16      106649 S ANTIBOD?
L17        1886 S L13 AND L14
L18         576 S L13/CLM
L19         166 S L18 AND L14
L20       40110 S L14/CLM
L21          84 S L20 AND L18
L22      256226 S L15/CLM
L23          41 S L22 AND L21
L24       40096 S L16/CLM
L25          25 S L24 AND L23
L26           2 S L25 NOT PY>1999

=> s phenanthroline/clm
L27         576 PHENANTHROLINE/CLM

=> s antibod?/clm
L28       40096 ANTIBOD?/CLM

=> s l28 and l27
```

```
L29         75 L28 AND L27

=> s (cancer? or tumor? or neoplas?)
         97231 CANCER?
         80395 TUMOR?
         28172 NEOPLAS?
L30     120455 (CANCER? OR TUMOR? OR NEOPLAS?)

=> s (cancer? or tumor? or neoplas?)/clm
         28917 CANCER?/CLM
         18702 TUMOR?/CLM
          4631 NEOPLAS?/CLM
L31      40110 (CANCER? OR TUMOR? OR NEOPLAS?)/CLM

=> s l31 and l29
L32         33 L31 AND L29

=> s l32 not py>1999
        949640 PY>1999
L33          7 L32 NOT PY>1999

=> s (conjugat? or link? or coupl?)/clm
         15782 CONJUGAT?/CLM
         99884 LINK?/CLM
        166801 COUPL?/CLM
L34     256226 (CONJUGAT? OR LINK? OR COUPL?)/CLM

=> s l34 and l33
L35          2 L34 AND L33

=> d ibib abs kwic 1-2

L35    ANSWER 1 OF 2     PCTFULL   COPYRIGHT 2008 Univentio on STN
ACCESSION NUMBER:       1996029417 PCTFULL  ED 20020514
TITLE (ENGLISH):        IL-13 RECEPTOR SPECIFIC CHIMERIC PROTEINS AND USES
                        THEREOF
TITLE (FRENCH):         PROTEINES CHIMERES SPECIFIQUES DU RECEPTEUR IL-13 ET
                        UTILISATION DE CES DERNIERES
INVENTOR(S):            PURI, Raj, K.;
                        DEBINSKI, Waldemar;
                        PASTAN, Ira;
                        OBIRI, Nicholas
PATENT ASSIGNEE(S):     THE GOVERNMENT OF THE UNITED STATES OF AMERICA,
                        represented by THE SECRETARY, DEPARTMENT OF HEALTH AND
                        HUMAN SERVICES;
                        PURI, Raj, K.;
                        DEBINSKI, Waldemar;
                        PASTAN, Ira;
                        OBIRI, Nicholas
LANGUAGE OF PUBL.:      English
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                        GB GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG
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                        TT UA UG US UZ VN KE LS MW SD SZ UG AM AZ BY KG KZ MD
                        RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL
                        PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
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PRIORITY INFO.: US 1995-8/404,685 19950315
APPLICATION INFO.: WO 1996-US3486 A 19960315
ABEN The present invention provides a method and compositions for specifically delivering an effector molecule to a tumor cell. The method involves providing a chimeric molecule that comprises an effector molecule attached to a targeting molecule that specifically binds an IL-13 receptor and contacting a tumor cell with the chimeric molecule.
ABFR L'invention a pour objet un procede et des compositions pour administrer une molecule effectrice a une cellule tumorale. Ce procede consiste a fournir une molecule chimere qui comprend une molecule effectrice fixee a une molecule cible qui se lie, de maniere specifique, au recepteur IL-13 et a amener une cellule tumorale en contact avec la molecule chimere.

CLMEN. . . of.the radiolabeled cytokines was estimated to range from 20 - 100 yCi/gg protein. For binding experiments, typically, IX106 renal cell carcinoma (RCC) tumor cells were incubated at 4'C for 2 hours with 121 I-IL-13 (100 pM) with or without increasing concentrations (up to 500. . . IL-13 receptor expression ranging from 15 to about 500 fold as compared to normal immune cells. In contrast, IL-4 receptors overexpressed on cancers have been reported at concentrations as high as 4000 sites per cell. Scatchard analyses (Scatchard, Ann. N. Y. Aca4d. Sci., 51:. . . . . . or 'I-IL-4 in the presence or absence of excess IL-13 or IL-4 for 2 h at 4'C. The bound ligand was cross- linked to its receptor with disuccinimidyl suberate (DSS) (Pierce, Rockford, Illinois, USA) at a final concentration of 2 mM for 30 min.. . . Triton X- 100, 1 mM phenylmethylsulfonyl fluoride, 0.02 mM leupeptin, 5.0 12 M trypsin inhibitor, 10 rnM benzamidine HCI, I mM phenanthroline iodoacetarnide, 50 rnM amino caproic acid, 10 uglml pepstatin, and 10 Azglml aprotinin. The cell lysates were cleared by boiling in buffer. . . lysate overnight at 4'C by incubating with protein A sepharose beads that had been pre-incubated with P7 anti hIL- 4R or anti-y. antibody and analyzed as above. The labeled 'I-IL-13 cross-linked to one major protein on all four RCC cell lines and the complex migrated as a single broad band ranging between. . . molecular mass of IL-13 (12 kDa), the size of IL-13 binding protein was estimated at 56 to 68 kDa. The 1211_IL- 13 cross-linked band was not observed when the crosslinking was performed in the presence of 200-fold molar excess of IL In addition to. . . on the other hand competed for I-I L-4 binding to both major proteins on WS-RCC cells. It is of interest that 125I-IL cross-linked protein was slightly larger in size in TF-LJ61, WS-RCC, PM-RCC, and HL-RCC cell lines compared to that seen in MA-RCC.

Post-translational
modifications,. . . site.
The NdeI/Hindlll fragment containing encoding hIL-13 was subc1oned into a vector obtained by digestion of plasmid pWDMH4-38QQR (Debinski et al. Int. J.
Cancer 58: 744-748 (1994)) or plasmid pSGC242FdNI (Debinski et al. Clin. Res. 42:
251 A, (abstr.) (1994) with NdeI and HindIll, to. . . before the chimeric toxin addition. Data were obtained
from the average of duplicates and the assays were repeated several times.
Several established cancer cell lines were tested to determine if hIL
PE38QQR is cytotoxic to them. In particular, cancers derived from colon, skin and
stomach were examined. The cancer cells were sensitive to hIL PE38QQR with
ID50s ranging from less than I ng/ml to 300 ng/ml (20 pM to 6.0. . . specific as it was blocked
by a 10-fold excess of hIL-13 on all cells. These data suggest that a spectrum of human
cancer cells possess hIL-13 binding sites and such cells are sensitive to hIL
PE38QQR chimeric toxin.
Because the ML- 13R has been. . . same binding site, the cells were also treated with the hIL based
recombinant toxin, hIL PE38QQR (Debinski et al. Int. J. Cancer 8: 744-748 (1994)).
The cytotoxic action of hIL PE38QQR had already been shown to be blocked by an
excess of hIL-4 but. . . (ii)
TGFa-PE40, and (iii) a recombinant immunotoxin C242rF(ab')-PE38QQR (Debinski et
al. Clin. Res. 42, 25 1 A, (Abstr.) (1994)). C242rF(ab')-PE38QQR binds a tumor-
associated antigen that is a sialylated glycoprotein (Debinski et al. J. Clin. Invest. 90:
405-411 (1992)). The expected cytotoxic actions of these. . . in a dose-dependent manner by hIL-4 alone, or by a ADP-ribosylation
deficient chimeric toxin containing hIL-4 (Debinski et al., Int. J. Cancer 58: 744-748
(1994)). This effect of hIL-4 or enzymatically deficient chimeric toxin can be best seen
with a prolonged time of incubation. . . determined. The interaction between the IL-13 receptor and the IL-4
receptor was evaluated by examining the effect of anti-IL-4 and anti-IL-4R antibodies on
IL-13 binding to RCC cells and the IL-13 modulation of RCC cell proliferation.
1) Inhohition af RCC' MI gyrowth hy 11,11-
Renal. . . I 000 ng/ml) were
added and incubation continued for an additional 72 h. Some cultures were concurrently
treated with anti-IL-4 or anti-IL-4R antibody (1-10 yg/ml). ['H]-thymidine (I 'UO/well)
was added for the final 20 h of incubation. At the end of the incubation, cells. . . form of IL-4
inhibited IL-13 and IL-4 effects (Zurawski et al., EMBO J., 12: 2663 (1993))), the
ability of anti-IL-4 or anti-IL-4R antibody to block both IL-4 and IL-13 growth
inhibitory effects was determined.

For this experiment, WS-RCC cells were treated
with IL-13 or IL-4 alone, or in the presence of a neutralizing
polyclonal antibody to
hIL-4 or a monoclonal antibody to IL-4R (M57). This approach
was chosen because a
suitable anti-hIL-13 was not readily available.
[2 H]-thymidine uptake was significantly inhibited ($p<0.05$). . .
(22621+210 cpm in treated vs 3222+458 cpm in control). While
the IL mediated inhibition of proliferation was abrogated by a
polyclonal anti-IL-4
antibody, the inhibitory effect of IL-13 was not affected by
the addition of anti-IL-4
antibody. Furthermore, the anti-proliferative effect of IL-4
was also abrogated by M57,
a monoclonal antibody against IL-4R, but the antiproliferative
effect of IL- 13 was not
affected by this antibody.
When WS-RCC cells were treated with a combination of IL-4 and IL-13,
the resulting inhibition of cellular proliferation was not significantly
different. . . using the
two cytokines together.
2) Inhilhifinn nf RCC calinny ffirmatinn hy H,
To confirm the observed IL-13 mediated inhibition of RCC tumor
cell
proliferation, a colony formation assay was used to evaluate the effect
of IL-13 on RCC
cell growth. Five hundred RCC cells. . . the inhibition of IL-4
binding by IL-13 and to
evaluate the fidelity of ligand binding by IL-13R, the effect of
anti-IL-4R antibody on
1211-IL-13 binding to PM-RCC cells, which express both IL-4R and IL-13R,
was
examined. As a control, the effect of this antibody on 1211
-IL-4 binding to PM-RCC
cells was also tested.
Recombinant human IL-4 and IL-13 were labeled with 1251 (Amersham
Corp.) by using. . . a buffered medium alone or in the presence of
excess cytokine (128
nM); monoclonal (M57) or polyclonal (P2, P39 P7) rabbit
antibodies raised against
human IL-4R. The antibodies were used at a final dilution of
1:64. The incubation was
done at VC for 2 h in a shaking water. . . cpm and 9,263±576
cpm respectively). Unlabeled IL-13 competed
well for 121 I-IL-13 binding, however, neither IL-4 nor any of three
different polyclonal
antibodies to IL-4R competed for the binding of 1211-IL-13 on
PM-RCC cells. Similarly,
a monoclonal antibody to IL-4R (M57) did not block the binding
of 121 I-IL-13 to
PM-RCC cells. In contrast, IL-4, IL-13 and anti-IL-4R antibody
(P7) all competed for
'25I-IL-4 binding on these cells.
This Example demonstrates that IL-13 inhibits the proliferation of human
RCC cells in a. . . lines. Although a similar magnitude of
growth inhibition has been reported for IL-4, this is the first report
of a direct anti-tumor
effect of IL-13 on RCC cells. Furthermore, inhibitory effects of IL-4 on
colony
forn. ation in RCC cells have not been previously. . . of IL-13 were
independent of IL-4 and did not

involve IL-4R. This is evidenced by the fact that polyclonal or monoclonal antibodies to
IL-4 or to the 140 kDa subunit of IL-4R had no effect on the growth inhibitory effect of
IL- 13. As. . . cells in vitro by 30% (Renard et al., Blood, 84: 2253-(1994)).
This growth inhibitory effect of IL-13 was abrogated by an antibody to the 140 kDa
subunit of IL-4R. Similarly, the growth stimulatory effect of IL-13 on TF- I cells was
also shown to be blocked by an antibody to IL-4R (e.g., Tony et al., Europ. J.
Biochem., 225: 659 (1994)). However, in this study, none of 3 different antibodies to
IL-4R blocked the growth inhibitory effect of IL These contrasting findings may
suggest that the antibodies used in this study and those used by others are directed at
different epitopes on the IL-4R protein. An alternative explanation,. . . identified. These include the absence of the
common gamma chain of the receptors for IL-2, 4, 7, 9, and 15 in tumor cell IL-4R,
although this chain is present in IL-4R of immune cells (Obiri et al. Oncol. Res., 6: 419
(1994)).
Previous studies have demonstrated that antibodies to IL-4R block cellular
responsiveness to IL- 13 (Tony et al., Europ. J. Biochem. . 225: 659 (1994)). However,
the effect of these antibodies on the binding of 121 I-IL-13 to the cells was not
investigated. We report here that the binding of radio-labeled IL-13 to its receptors on
RCC cells could not be blocked by a polyclonal antibody to IL-4R which did block the
binding of radio-labeled IL-4 to its receptors. These data suggest that in RCC cells,
IL-13 interaction. . . and competes for IL-4 binding but IL-4 did does compete for IL- 13 binding
in RCC cells. In addition, IL-4 cross links to a '70 kDa protein in addition to its
primary 140 kDa binding protein. Taken together, these data suggest that the. . . finding that IL-13 competes for '251-IL-4 binding while IIL-4 does not compete for 121 I-IL-13 binding on these cells. Finally, since antibody to
IL-4R did not block IL-13 binding, and 12II-IL-13 cross linking to the p140 form of the
IL-4R was not detected, in RCC cells, IL-13 does not appear to utilize the 140. . . cell types.
In summary, IL-13, like IL-4 directly inhibits RCC proliferation in vitro.
The IL-13 effect is independent of IL-4 since anti-IL-4R antibody did not inhibit IL-13
binding to its receptor and anti-IL-4R antibody did not inhibit the IL-13 effect on RCC
cells. These findings suggest that IL-13R directed chimeric molecules are particularly
useful for the. . . Cells hy
Rpeornh*n.qnt ILe PE, Cyt toxins
1) Qdotnxicity of TI.-13A-oxin-fusion-protein.
The cytotoxic activity of IL4-toxins was tested as described above. Typically, 10' RCC tumor cells or other cells were cultured in

leucine-free medium with
or without various concentrations of IL-toxin for 20-22 hours at 37C..
. . cells are killed by IL13-PE38QQR at
uniquely low concentrations of the chimeric protein.
Table 2. Cytotoxic activity of IL13-PE38QQR on human RCC tumor
cell lines.
Tumors IC50 (ng/ml)' IL-13 binding Reference
mean ± SD sites/cell No.
HL-RCC 0.039 < 0.1 1509000 13
PM-RCC 0.090 + 0.01 269500 13
MA-RCC 0.340. . . inhibition of protein synthesis is
observed compared to untreated cells and was determined as described
under methods.
The mean 'C50 for individual tumors is shown and was
determined from 2-5 experiments
for four RCC tumor cell lines.
'Single experiment performed in quadruplicate using 5 different
concentration of 11,13-
toxin.
C current data
1) CarrPlation hptwppn 11,13R PxprP_rq*nn and gensitivity. . . IL-
13 ranged between 44 to 128pCi/jAg. The IL-13 binding assay was
performed by as
described above (see Example 1). Briefly, RCC tumor cells were
harvested after brief
incubation with versene (Biowhittaker), washed three times in Hanks
balanced salt
solution and resuspended in binding buffer. . . to 11,13-toxe
In order to determine the antitumor activity of ILI 3-toxin against
human
RCC, human RCC cells were grown as subcutaneous tumors in nude
mice, irradiated
(300 rads) nude mice and in SCID mice. However, these RCC cells did not
grow
consistently in any of these immunoincompetent mice. In some cases
tumors did grow
very slowly but became centrally necrotic with a white rim of viable RCC
cells.
Therefore, antitumor activity of IL13 toxin was not evaluated in vivo.
However, MA-RCC were passaged in nude mice and the passaged
tumors were used to
prepare single cell suspensions. These cells did grow in tissue culture
and after 1-3
passages, their sensitivity to IL13-toxin. . . twice did not decrease
their sensitivity. These data suggest that IL-13R
levels do not change by in vivo passaging of RCC tumor cells.
]%]] .. 4 I
an is not ryintoxic to immune rells, monaryles, honp marrow-dPr*yPd
rplls.. sand Burkitt'.q lym harna MI&
The. . . competed for the binding sites of IL-4 while IL-4 did not
compete
for the binding site of IL However, in other cancer cell types
IL-4 neutralized the
cytotoxicity mediated by IL13-PE38QQR. The ability of IL-4 to neutralize
the
cytotoxicity of IL13-toxin on RCC cells. . .
. . .
carcinoma cell lines.
Recent data demonstrate that both IL-4 and IL-13 caused the
phosphorylation of 140 kDa
IL-4 binding protein. In addition, antibody to 140 kDa IL-4
binding protein blocked the

effects of IL-13 on B cells. While these studies, suggest that the 140. . . molecule in which the toxin moiety is attached at a site away from the C-terminus residues should be more cytotoxic to cancer cells.

In summary, these results indicate that IL13-toxin IL13-PE38QQR is highly cytotoxic to human RCC cells which express high numbers of IL-13R.. . . and Are Extremely Sensitive t TI-13PF. Chimpr*r Protpon-ri

In order to evaluate the efficacy of the chimeric immunotoxins of this invention on brain tumors, cytotoxicity (as evaluated by inhibition of protein synthesis) and competitive inhibition assays were performed on a number of brain tumor cell lines as described below.

1) Prntpon synthEb-sis inhibition sissay,

The cytotoxic activity of chimeric toxins (e.g., hIL13-PE38QQR) was tested on brain tumor cell lines. This group of cells is represented by human gliornas and includes U-373 MG, DBTRG-05 MG, A-172, Hs 683, U-251. . . . . from the ATCC and they were maintained under conditions recommended by the ATCC. The SNB-19 cell line was obtained from National Cancer Institute/Frederick Cancer Research Facility, DCT tumor repository. Both SNB-19 and SW-1088 cell lines are of neuroglial origins.

Usually about I x 104 cells/well were plated in a 24-well. . . the addition of chimeric toxins (CTs). Data were obtained from the average of duplicates and the assays were repeated several times.

The cancer cells were sensitive to hIL13-PE38QQR with IC,(s ranging from less than 0. I ng/ml to more than 300 ng/nil (2 pM. . . represented by T-98G and SW 1088 had poorer responses with IC50S of 300 and > 1000 ng/ml, respectively. The only human cancer cell line of neural origin tested, the SK-N-MC neuroblastoma cell line, responded relatively poor to the chimeric toxin.

The cytotoxic action of hIL13-PE38QQR. . . blocked by a 10- or 100-fold excess of hIL13 on the studied cells. These data indicate that most of the human glioma cancer cells examined possess hIL13 binding sites and such cells are extremely sensitive to hIL13-PE38QQR.

2) C-3datox*c qrt*v*ti of other cytakine-haspd chimpric 11rotping. . . been shown that some glioma cell lines can be killed by hIL4-PE4E with IC50s exceeding 10 ng/ml (Puri et al. Int. J. Cancer, 58: 574-581 (1994)) . HIL13-PE38QQR was cytotoxic to U-251 MG, U-373 MG and DBTRG MG cell lines with IC50s much below. . . the hIL4-PE4E variant of the chimeric toxin (Debinski, et al. J. Biol. Chem., 268: 14065-14070 (1993), Puri et al. Int. J. Cancer, 58: 574-581 (1994)) which is consistent with observations made with other growth factor-based chimeric proteins (Slegall et al. Cancer Res., 51: 2831-2836 (199 1)). Interestingly, hIL6-PE40 was also active on some

human glioma cells and its activity was similar to. . . considerably better than that
of other interleukin-based chimeric toxins.
3) r-ampefifiVe h.*ndin.
The previous examples demonstrated that the action of hIL13-PE38QQR on several solid tumor cell lines is hIL13- and hIL4-specific, i.e., it can be blocked by
these two cytokines but not by IL2. However, it. . . al. J. Biol. Chem., 270: 8797-8804 (1995))
and it cannot block the cytotoxic action of the hIL13-based chimeric protein on some
other cancer cell lines. Thus, the ability of hIlA to block the IL13-toxin cytotoxin in
glial cells was determined.
The hIL4 cytokine was ineffective. . . of the radiolabeled cytokines was estimated to range from 20 to 100 IACilyg of protein. For binding
experiments, typically I X 106 tumor cells were incubated at 4cC for 2 h with 121 1-hIL 1 3
(100 pM) with or without increasing concentrations (up. . . hIL13-PE38QQR on
these cells. Thus, the receptors for hIL13 and hILA in glioma cells are different from
those found in several solid tumor cell lines.
The hIL13-PE38QQR cytotoxin is considerably more active on glioma cell lines than the comparable ILA-based chimeric toxin. This difference in. . . IL4 per cell. Interestingly, some human glioma cells can also be killed
by a chimeric toxin containing hIL6 (Siegall et al., Cancer Res., 51: 2831-2836 (1991)).
However, the potency of hIL6-PE40 chimeric protein is lower from that of hIL13-
PE38QQR.
FX2 ple-9
CWmpr*c Toxins HaAng-Incren ed-Cy-totoxicity
Two. . . additional amino acids (GlyGlySerGly) are located in between the residues 114 and I of the wild type hIL13. Circularly permuted hIL13 was
linked to the first amino acid of PE38QQR. The cphIL PE38QQR was expressed in
E. coli and purified to homogeneity.
Both hIL PE4E. . . 11A 3R Directed Cyf ntnxinx an Neum) Cnnrpr4,q
The cytotoxicity of two chimeric toxins (hIL PE38QQR and hIL-13PE4E) was tested on cancer cell lines of neural origins. The DAOY, TE671, and
D283 medulloblastorna cell lines were all responsive to hIL-13 fused to PE4E.. . . suggest that the overexpression
of a receptor for hIL-13 is not restricted to gliornas, but it can be observed in neuron-
derived cancers.
IL-13R Targyptpd CVtotaxins are EffPctive Apskinst Knpago's Sarmnask
The recombinant immunotoxin IL PE38QQR was also tested against Kaposi's sarcoma cell lines (NCB59, KS248,. . . hereby incorporated by reference for all
purposes.
WHAT IS CLADAED IS:
I 1. A method for specifically delivering an effector molecule to a tumor
cell bearing an IL-13 receptor, said method comprising:
providing a chimeric molecule comprising said effector molecule attached to a targeting molecule that specifically binds to an IL-13 receptor; and

contacting said tumor with said chimeric molecule;
wherein said chimeric molecule specifically binds to a tumor
cell.

3 The method of claim 1, wherein said targeting molecule is an
anti-IL-13 receptor antibody.

5 The method of claim 1, wherein said tumor is selected from
the
group consisting of a carcinoma.

6 The method of claim 1, wherein said tumor is selected from
the
group consisting of a renal cell carcinoma, a gliorna, a
medulloblastorna, a renal cell
carcinoma, and a Kaposi's. . . molecule is selected
from the group consisting of a cytotoxin, a label, a radionuclide, a
drug, a liposome, a
ligand, and an antibody.

14 A method for impairing growth of tumor cells bearing an
IL-13
receptor, said method comprising contacting said tumor with a
chimeric molecule
comprising:
a targeting molecule that specifically binds a human IL-13 receptor; and
an effector molecule selected from the group consisting of a cytotoxin,
a
radionuclide, a ligand and an antibody;
wherein said chimeric molecule specifically binds to a tumor
cell.

15 The method of claim 14, wherein said targeting molecule is an
antibody that specifically binds a human IL-13 receptor.

24 The method of claim 16, 17, wherein said tumor cell growth
is
tumor cell growth in a human.

26 A method for detecting the presence or absence of a tumor,
said
method comprising contacting said tumor with a chimeric
molecule comprising:
a targeting molecule that specifically binds a human IL-13 receptor; and
a detectable label; and
detecting the presence. . . protein comprising an IL-13 or circularly
permuted IL-13 attached to a
polypeptide wherein said chimeric fusion protein specifically binds to a
tumor cell
bearing an IL-13 receptor.
. . .
comprising an IL-13 or a circularly permuted IL-13 attached to a
polypeptide wherein said chimeric fusion protein specifically binds to a
tumor cell
bearing an IL-13 receptor.

34 A chimeric molecule that specifically binds a tumor cell
bearing an
IL-13 receptor, said chimeric molecule comprising a cytotoxic molecule
attached to a
targeting molecule that specifically binds an IL-13. . .

40 A chimeric molecule that specifically binds a tumor cell bearing an IIL-13 receptor, said chimeric molecule comprising an effector molecule attached to an antibody that specifically binds an IL-13 receptor.

. . .

molecule is selected from the group consisting of a cytotoxin, a label, a radionuclide, a drug, a liposome, a ligand, and an antibody.

. . .

molecule is selected from the group consisting of a cytotoxin, a label, a radionuclide, a drug, a liposome, a ligand, and an antibody.

L35 ANSWER 2 OF 2 PCTFULL COPYRIGHT 2008 Univentio on STN

ACCESSION NUMBER: 1993024634 PCTFULL ED 20020513

TITLE (ENGLISH): DIPEPTIDYL PEPTIDASE-I, CLONING IT, AND THERAPEUTIC AGENTS CONTAINING INHIBITORS THEREOF

TITLE (FRENCH): DIPEPTIDYLE PEPTIDASE-I, SON CLONAGE ET AGENTS THERAPEUTIQUES CONTENANT DES INHIBITEURS DE CETTE SUBSTANCE

INVENTOR(S): THIELE, Dwain, L.;
LIPSKY, Peter, E.;
McGUIRE, Michael, J.

PATENT ASSIGNEE(S): BOARD OF REGENTS, THE UNIVERSITY OF TEXAS SYSTEM;
THIELE, Dwain, L.;
LIPSKY, Peter, E.;
McGUIRE, Michael, J.

LANGUAGE OF PUBL.: English

DOCUMENT TYPE: Patent

PATENT INFORMATION:

NUMBER	KIND	DATE
WO 9324634	A1	19931209

DESIGNATED STATES

W: AT AU BB BG BR CA CH CZ DE DK ES FI GB HU JP KP KR LK LU MG MN MW NL NO NZ PL PT RO RU SD SE SK UA US VN AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

PRIORITY INFO.: US 1992-7/890,422 19920529

APPLICATION INFO.: WO 1993-US5093 A 19930528

ABEN Therapeutic agents and methods for the treatment of immunologically mediated diseases and malignancies of myeloid cell or lymphoid cell origin. These particular methods utilize the characterization of particular activation mechanisms important to the progression of these pathologies in humans. Selective inhibition of cell types responsible for precipitating these disorders in humans are provided with therapeutic agents which include peptides capable of inhibiting dipeptidyl peptidase-I activation of proenzymes present primarily in cytotoxic T-cells and myeloid cells, such as Gly-Phe-CHN2. Antisense oligonucleotides are also characterized which are specific for human dipeptidyl peptidase-I gene which may be used in the treatment of the described disorders.

ABFR Agents therapeutiques et procedes de traitement de maladies a mediation immunologique et

d'affections malignes originaires des cellules myeloides ou lymphoides. Ces procedes particuliers
utilisent la caracterisation de mecanismes d'activation particuliers jouant un role important dans
la progression de ces etats pathologiques chez l'homme. L'inhibition selective de certains types de
cellules responsables de ces affections chez l'homme est obtenue a l'aide d'agents therapeutiques
comprenant des peptides pouvant inhiber l'activation par la dipeptidyle peptidase-I de proenzymes,
telle Gly-Phe-CHN2, presentes principalement dans les lymphocytes T cytotoxiques et dans les
cellules myeloides. Sont egalement caracterises des oligonucleotides antisens, qui sont specifiques
du gene humain de dipeptidyle peptidase-I et qui peuvent etre utilises dans le traitement des
affections susmentionnees.

CLMEN. . . of Protease Inhibitors on DPPI ActiyLt
]y
Inhibitor Concentration Percentage
control activity
PMSF 1 mm 98
TLCK I mm 5
TPCK 1 mm 10
1110- 1 mm 98
Phenanthroline
Bestatin 500 Ag/Ml 103
Cystatin 50 AgIml 32
N-Ethylmaleimide 1 mm 63
Gly-Phe- 20 jiM 12
diazomethane
Iodoacetic acid 1 mm 10
Mersalyl acid 1 mm 3
2121-. . .

. . .
no viable cells recovered at
the end of 4 days of culture with Gly-Phe-CHN2 (see Figure 5).
In contrast, proliferation of another myeloid tumor
cell line, THP-1, was not affected by incubation with an
identical concentration of the DPPI inhibitor.
Cell division in the relatively undifferentiated
myeloid cell. . . the DPPI inhibitor is also consistent with the
proposed role of DPPI in the processing and activation of
the myeloblastin, as myeloid tumor cells cultured with
antisense oligonucleotides to inhibit myeloblastin
synthesis undergo similar differentiation.
Of note, only partial inhibition of serine protease
activity in the U-937. . .

. . .
active, mature protease by aprotinin-
agarose affinity chromatography. Both active and
inactive forms of cathepsin G were further purified by
immunoaffinity using specific antibodies adsorbed to
protein A-Sepharose. At the end of the 4 hour chase
period, cells exposed to the DPPI inhibitor (Gly-Phe-CHN2)
had accumulated less. . .

. . .
compared
to the activity of spleen DPPI by determining subcellular
localization, substrate and inhibitor specificity,

chromatographic and electrophoretic behavior and antigenic identity.

Preparation of anti-DPPI antibodies

Antibodies to human DPPI will be produced in rabbits. Since it is difficult to purify large amounts of DPPI from human spleen, alternate. . . DPPI have been short and predominantly hydrophobic (Table 4). Once identified, the most suitable peptide sequence would be prepared by chemical synthesis and cross-linked to a carrier protein for immunizing rabbits.

PROPHETIC EXAMPLE 12

PREPARATION OF ANTISENSE OLIGONUCLEOTIDES FOR INHIBITION OF EXPRESSION OF DPPI GENE

The present example is. . . reference for the purpose. In general, there are two commonly used solid phase-based approaches to the synthesis of oligonucleotides containing conventional 51-3f linkages, one involving intermediate phosphoramidites and the other involving intermediate phosphonate linkages. In the phosphoramidite synthesis a suitably protected nucleotide having a cyanoethylphosphoramidate at the position to be coupled is reacted with the free hydroxyl of a growing nucleotide chain derivatized to a solid support. The reaction yields a cyanoethylphosphite, which linkage must be oxidized to the cyanoethylphosphate at each intermediate step, since the reduced form is unstable to acid.

The phosphonate based synthesis is conducted by the reaction of a suitably protected nucleotide containing a phosphonate moiety at a position to be coupled with a solid Dhase-derivatized nuclectide chain having a free hydroxyl group, in the presence of a suitable activator to obtain a phosphonate diester linkage, which is stable to acid. Thus, the oxidation to the phosphate or thiophosphate can be conducted at any point during synthesis of the. . . or absence of canine pancreatic membranes. The protein product will then be assayed for enzymatic activity and for reactivity with a specific anti-DPPI antibody.

Culture of Myeloid Cells with Antisense Oligonucleotides

Synthetic oligonucleotides will be prepared with sequences that are complementary to the DPPI sense RNA strand as. . . independent of nuclear degradation, additional 1-4 hour assays will utilize 51Cr labeled TNP-modified SREC as targets of cytotoxicity triggered by anti-CD3/anti-TNP heteroconjugated antibodies as previously described.51

Where capacity for SRBC lysis is found to be significantly impaired in CTL generated under culture conditions in which]levels of perforin. . .

22 A cancer chemotherapeutic agent for the treatment of a malignancy of myeloid cell or cytotoxic lymphocyte origin, said agent comprising an oligonucleotide capable of inhibiting. . .

23 A cancer chemotherapeutic agent for the treatment of malignacies of myeloid cell or cytotoxic lymphoid origin comprising a proteses inhibitor.

24 The cancer chemotherapeutic agent of claim 22 further defined as an antisense oligonucleotide which

includes a sequence complementary to the messenger RNA
for human. . .

25 The cancer chemotherapeutic agent of claim 22
wherein the malignancy is defined as leukemia.

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FILE LAST UPDATED: 17 Mar 2008  (20080317/ED)

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=> s intercalating
L36       6756 INTERCALATING

=> s conjugat? or coupl? or link?
        248248 CONJUGAT?
        875398 COUPL?
        528677 LINK?
L37    1580071 CONJUGAT? OR COUPL? OR LINK?

=> s l37 (L) l36
L38        619 L37 (L) L36

=> s targeting
         80385 TARGETING
             9 TARGETINGS
L39      80387 TARGETING
                 (TARGETING OR TARGETINGS)

=> s l39 and l38
L40         45 L39 AND L38
```

```
=> s cancer? or tumor? or neoplas?
        368933 CANCER?
        508213 TUMOR?
        534285 NEOPLAS?
L41     844007 CANCER? OR TUMOR? OR NEOPLAS?

=> s l41 and l40
L42         14 L41 AND L40

=> d ibib 1-14

L42  ANSWER 1 OF 14  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2007:1196734  CAPLUS
TITLE:                   Targeting the Inverted CCAAT Box-2 of the
                         Topoisomerase Ii Gene Using a Polyamide Conjugated
                         with a Threading Unit
AUTHOR(S):               Wang, Leekon N.; Mackay, Hilary; Brown, Toni; O'Hare,
                         Caroline; Hartley, John A.; Lee, Moses
CORPORATE SOURCE:        Department of Chemistry, Furman University,
                         Greenville, SC, 29613, USA
SOURCE:                  Abstracts, 59th Southeast Regional Meeting of the
                         American Chemical Society, Greenville, SC, United
                         States, October 24-27 (2007), GEN-357.  American
                         Chemical Society: Washington, D. C.
                         CODEN: 69JZGR
DOCUMENT TYPE:           Conference; Meeting Abstract
LANGUAGE:                English

L42  ANSWER 2 OF 14  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2007:845207  CAPLUS
DOCUMENT NUMBER:         147:235343
TITLE:                   Preparation of wortmannin conjugates and use as
                         antitumor, anti-inflammatory and antifungal agents
INVENTOR(S):             Yuan, Hushan; Luo, Ji; Weissleder, Ralph; Cantley,
                         Lewis; Josephson, Lee
PATENT ASSIGNEE(S):      Beth Israel Deaconess Medical Center, USA; The General
                         Hospital Corporation
SOURCE:                  PCT Int. Appl., 96pp.
                         CODEN: PIXXD2
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 2007086943         A2    20070802    WO 2006-US34046         20060831
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
             KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN,
             MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS,
             RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
             GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                       US 2005-713242P     P  20050901
OTHER SOURCE(S):         CASREACT 147:235343; MARPAT 147:235343
```

L42 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2007:290000 CAPLUS
TITLE: Exploring carbohydrates to design blood-brain barrier-penetrating, brain tumor-targeting anthracyclines
AUTHOR(S): Priebe, Waldemar
CORPORATE SOURCE: Department of Experimental Therapeutics, The University of Texas M. D. Anderson Cancer Center, Houston, TX, 77030-1402, USA
SOURCE: Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), CARB-014. American Chemical Society: Washington, D. C.
CODEN: 69JAUY
DOCUMENT TYPE: Conference; Meeting Abstract; (computer optical disk)
LANGUAGE: English

L42 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:137500 CAPLUS
DOCUMENT NUMBER: 144:343209
TITLE: Growth inhibition and apoptosis induced by daunomycin-conjugated triplex-forming oligonucleotides targeting the c-myc gene in prostate cancer cells
AUTHOR(S): Napoli, Sara; Negri, Umberto; Arcamone, Federico; Capobianco, Massimo L.; Carbone, Giuseppina M.; Catapano, Carlo V.
CORPORATE SOURCE: Laboratory of Experimental Oncology, Oncology Institute of Southern Switzerland, Bellinzona, CH-6500, Switz.
SOURCE: Nucleic Acids Research (2006), 34(2), 734-744
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:1065345 CAPLUS
DOCUMENT NUMBER: 142:384773
TITLE: Platinum-intercalator conjugates: From DNA-targeted cisplatin derivatives to adenine binding complexes as potential modulators of gene regulation
AUTHOR(S): Baruah, Hemanta; Barry, Colin G.; Bierbach, Ulrich
CORPORATE SOURCE: Department of Chemistry, Wake Forest University, Winston-Salem, NC, 27109-7486, USA
SOURCE: Current Topics in Medicinal Chemistry (Sharjah, United Arab Emirates) (2004), 4(15), 1537-1549
CODEN: CTMCCL; ISSN: 1568-0266
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:539805 CAPLUS
DOCUMENT NUMBER: 141:254961
TITLE: Cancer gene targeting using new PNA (peptide nucleic acid)
AUTHOR(S): Shiraishi, Takehiko

CORPORATE SOURCE: Center for Biomolecular Recognition, Panum Institute, Copenhagen, Den.
SOURCE: Seibutsu Kogaku Kaishi (2004), 82(4), 152-154
CODEN: SEKAEA; ISSN: 0919-3758
PUBLISHER: Nippon Seibutsu Kogakkai
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L42 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:402195 CAPLUS
DOCUMENT NUMBER: 141:18292
TITLE: DNA binding and antigene activity of a daunomycin-conjugated triplex-forming oligonucleotide targeting the P2 promoter of the human c-myc gene
AUTHOR(S): Carbone, Giuseppina M.; McGuffie, Eileen; Napoli, Sara; Flanagan, Courtney E.; Dembech, Chiara; Negri, Umberto; Arcamone, Federico; Capobianco, Massimo L.; Catapano, Carlo V.
CORPORATE SOURCE: Laboratory of Experimental Oncology, Oncology Institute of Southern Switzerland, Bellinzona, Bellinzona, 6500, Switz.
SOURCE: Nucleic Acids Research (2004), 32(8), 2396-2410
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:532140 CAPLUS
DOCUMENT NUMBER: 139:106450
TITLE: Targeted multivalent macromolecules
INVENTOR(S): Wartchow, Charles Aaron; Dechene, Neal Edward; Pease, John S.; Shen, Zhimin; Trulson, Julie; Bednarski, Mark David; Danthi, S. Narasimhan; Zhang, Michael; Choi, Hoyul Steven
PATENT ASSIGNEE(S): Targesome, Inc., USA
SOURCE: U.S. Pat. Appl. Publ., 71 pp., Cont.-in-part of U.S. Ser. No. 976,254.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2003129223	A1	20030710	US 2002-158777		20020530
US 2002071843	A1	20020613	US 2001-976254		20011011
ZA 2003009924	A	20050622	ZA 2003-9924		20031222
US 2006188560	A1	20060824	US 2006-396743		20060403
PRIORITY APPLN. INFO.:			US 2000-239684P	P	20001011
			US 2001-294309P	P	20010530
			US 2001-309104P	P	20010731
			US 2001-312435P	P	20010815
			US 2001-976254	A2	20011011
			US 2001-345891P	P	20011029
			US 2002-158761	A3	20020530

L42 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2002:290105 CAPLUS
DOCUMENT NUMBER: 137:241786
TITLE: The interaction of DNA-targeted platinum phenanthridinium complexes with DNA in human cells
AUTHOR(S): Whittaker, Joanne; McFadyen, W. David; Baguley, Bruce C.; Murray, Vincent
CORPORATE SOURCE: School of Biochemistry and Molecular Genetics, University of New South Wales, Sydney, 2052, Australia
SOURCE: Anti-Cancer Drug Design (2001), 16(2/3), 81-89
CODEN: ACDDEA; ISSN: 0266-9536
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:263042 CAPLUS
DOCUMENT NUMBER: 120:263042
TITLE: DNA transporter system and its use for genetic transformation and gene therapy
INVENTOR(S): Smith, Louis C.; Woo, Savio L. C.
PATENT ASSIGNEE(S): Baylor College of Medicine, USA
SOURCE: PCT Int. Appl., 209 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9318759	A1	19930930	WO 1993-US2725	19930319
W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GR, HU, JP, LU, NL, NO, PL, RO, RU, SE, UA, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, NL				
AU 9339668	A	19931021	AU 1993-39668	19930319
AU 671450	B2	19960829		
EP 632722	A1	19950111	EP 1993-909155	19930319
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 07505283	T	19950615	JP 1993-516812	19930319
US 6033884	A	20000307	US 1993-167641	19931214
US 5994109	A	19991130	US 1995-460890	19950603
US 6150168	A	20001121	US 1995-460971	19950605
US 6177554	B1	20010123	US 1995-462040	19950605
PRIORITY APPLN. INFO.:			US 1992-855389 A	19920320
			WO 1993-US2725 A	19930319
			US 1993-167641 A3	19931214

L42 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:24989 CAPLUS
DOCUMENT NUMBER: 120:24989
TITLE: In vivo homologous sequence targeting in eukaryotic cells
INVENTOR(S): Zarling, David A.; Sena, Elissa P.
PATENT ASSIGNEE(S): SRI International, USA
SOURCE: PCT Int. Appl., 100 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9322443	A1	19931111	WO 1993-US3868	19930423
W: AU, BR, CA, FI, HU, JP, KR, NO, NZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9341156	A	19931129	AU 1993-41156	19930423
JP 07506252	T	19950713	JP 1993-519421	19930423
EP 672159	A1	19950920	EP 1993-910780	19930423
EP 672159	B1	20051228		
R: DE, FR, GB, IT, NL				
US 5763240	A	19980609	US 1994-275916	19940714
US 6255113	B1	20010703	US 1995-385713	19950208
US 2002090361	A1	20020711	US 1997-910415	19970813
US 2004019916	A1	20040129	US 2003-379182	20030303
AU 2003203428	A1	20030612	AU 2003-203428	20030402
US 2005214944	A1	20050929	US 2004-973209	20041025
PRIORITY APPLN. INFO.:			US 1992-873438 A	19920424
			US 1992-939767 A	19920902
			WO 1993-US3868 A	19930423
			US 1994-275916 A1	19940714
			US 1995-385713 A1	19950208
			US 1997-41173P P	19970321
			US 1997-906379 B1	19970805
			US 1997-910415 A1	19970813
			US 1998-79877 B1	19980515
			AU 1999-40797 A3	19990514
			US 2001-927160 A2	20010809
			US 2001-990433 A1	20011120

L42 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:400463 CAPLUS
DOCUMENT NUMBER: 117:463
TITLE: Development and characterization of a WEHI-3B D+ monomyelocytic leukemia cell line resistant to novobiocin and cross-resistant to other topoisomerase II-targeted drugs
AUTHOR(S): Rappa, Germana; Lorico, Aurelio; Sartorelli, Alan C.
CORPORATE SOURCE: Sch. Med., Yale Univ., New Haven, CT, 06510, USA
SOURCE: Cancer Research (1992), 52(10), 2782-90
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English

L42 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1991:488358 CAPLUS
DOCUMENT NUMBER: 115:88358
TITLE: Targeting radiosensitizers to DNA by attachment of an intercalating group: nitroimidazole-linked phenanthridines
AUTHOR(S): Cowan, D. S. M.; Panicucci, R.; McClelland, R. A.; Rauth, A. M.
CORPORATE SOURCE: Exp. Ther. Div., Ontario Cancer Inst., Toronto, ON, Can.
SOURCE: Radiation Research (1991), 127(1), 81-9
CODEN: RAREAE; ISSN: 0033-7587
DOCUMENT TYPE: Journal
LANGUAGE: English

L42 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1983:443454 CAPLUS
DOCUMENT NUMBER: 99:43454

ORIGINAL REFERENCE NO.: 99:6745a,6748a
TITLE: Targeting of daunorubicin by covalent and reversible linkage to carrier proteins. Lysosomal hydrolysis and antitumoral activity of conjugates prepared with peptidic spacer arms
AUTHOR(S): Baurain, R.; Masquelier, M.; Deprez-De Campeneere, D.; Trouet, A.
CORPORATE SOURCE: Int. Inst. Cell. Mol. Pathol., Brussels, Belg.
SOURCE: Drugs under Experimental and Clinical Research (1983), 9(4), 303-11
CODEN: DECRDP; ISSN: 0378-6501
DOCUMENT TYPE: Journal
LANGUAGE: English

=> d ibib abs kwic 11 and 13
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The following are valid formats:

ABS --------- GI and AB
ALL --------- BIB, AB, IND, RE
APPS -------- AI, PRAI
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CBIB -------- AN, plus Compressed Bibliographic Data
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DALL -------- ALL, delimited (end of each field identified)
DMAX -------- MAX, delimited for post-processing
FAM --------- AN, PI and PRAI in table, plus Patent Family data
FBIB -------- AN, BIB, plus Patent FAM
IND --------- Indexing data
IPC --------- International Patent Classifications
MAX --------- ALL, plus Patent FAM, RE
PATS -------- PI, SO
SAM --------- CC, SX, TI, ST, IT
SCAN -------- CC, SX, TI, ST, IT (random display, no answer numbers; SCAN must be entered on the same line as the DISPLAY, e.g., D SCAN or DISPLAY SCAN)
STD --------- BIB, CLASS

IABS -------- ABS, indented with text labels
IALL -------- ALL, indented with text labels
IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

HIT --------- Fields containing hit terms
HITIND ------ IC, ICA, ICI, NCL, CC and index field (ST and IT) containing hit terms
HITRN ------- HIT RN and its text modification
HITSTR ------ HIT RN, its text modification, its CA index name, and its structure diagram
HITSEQ ------ HIT RN, its text modification, its CA index name, its structure diagram, plus NTE and SEQ fields
FHITSTR ----- First HIT RN, its text modification, its CA index name, and

```
              its structure diagram
FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
KWIC -------- Hit term plus 20 words on either side
OCC --------- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field
codes.  For a list of the display field codes, enter HELP DFIELDS at
an arrow prompt (=>).  Examples of formats include: TI; TI,AU; BIB,ST;
TI,IND; TI,SO.  You may specify the format fields in any order and the
information will be displayed in the same order as the format
specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR,
FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC
to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):end

=> d ibib abs kwic 11

L42  ANSWER 11 OF 14  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         1994:24989  CAPLUS
DOCUMENT NUMBER:          120:24989
TITLE:                    In vivo homologous sequence targeting in
                          eukaryotic cells
INVENTOR(S):              Zarling, David A.; Sena, Elissa P.
PATENT ASSIGNEE(S):       SRI International, USA
SOURCE:                   PCT Int. Appl., 100 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   4
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 9322443            A1    19931111    WO 1993-US3868          19930423
         W:  AU, BR, CA, FI, HU, JP, KR, NO, NZ
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     AU 9341156            A     19931129    AU 1993-41156           19930423
     JP 07506252           T     19950713    JP 1993-519421          19930423
     EP 672159             A1    19950920    EP 1993-910780          19930423
     EP 672159             B1    20051228
         R:  DE, FR, GB, IT, NL
     US 5763240            A     19980609    US 1994-275916          19940714
     US 6255113            B1    20010703    US 1995-385713          19950208
     US 2002090361         A1    20020711    US 1997-910415          19970813
     US 2004019916         A1    20040129    US 2003-379182          20030303
     AU 2003203428         A1    20030612    AU 2003-203428          20030402
     US 2005214944         A1    20050929    US 2004-973209          20041025
PRIORITY APPLN. INFO.:                        US 1992-873438      A   19920424
                                              US 1992-939767      A   19920902
                                              WO 1993-US3868      A   19930423
                                              US 1994-275916      A1  19940714
                                              US 1995-385713      A1  19950208
                                              US 1997-41173P      P   19970321
                                              US 1997-906379      B1  19970805
                                              US 1997-910415      A1  19970813
                                              US 1998-79877       B1  19980515
                                              AU 1999-40797       A3  19990514
                                              US 2001-927160      A2  20010809
                                              US 2001-990433      A1  20011120
```

AB Methods for targeting an exogenous nucleic acid to a predetd. endogenous DNA target sequence in a eukaryotic cell by homologous pairing are described. The efficiency of recombination is increased by introducing the DNA with recombination factors, e.g. by coating it with recA protein, or as a conjugate or complex with a chemical capable of cleaving DNA, e.g. photodynamic porphyrins, intercalating agents. The methods may be used for gene therapy and the preparation of transgenic animals. Hep-2 cells were immobilized in agarose and the nuclear membranes permeabilized by solubilization of the cell membrane with detergent using a modification of the prior art to avoid the use of mineral oil. The nuclei were then mixed with a biotin-14-dATP-labeled chromosome 1 α-satellite DNA optionally coated with RecA protein. Laser fluorescence microscopy of the nuclei showed efficient and accurate integration of the DNA to the intended site. A defective Escherichia coli β-galactosidase gene integrated into Hep-2 cells was repaired by targetted integration of a functional allele of the gene. Targetting of the p53 tumor suppressor gene and the CFTR disease gene were demonstrated.

TI In vivo homologous sequence targeting in eukaryotic cells

AB Methods for targeting an exogenous nucleic acid to a predetd. endogenous DNA target sequence in a eukaryotic cell by homologous pairing are described.. . . recombination is increased by introducing the DNA with recombination factors, e.g. by coating it with recA protein, or as a conjugate or complex with a chemical capable of cleaving DNA, e.g. photodynamic porphyrins, intercalating agents. The methods may be used for gene therapy and the preparation of transgenic animals. Hep-2 cells were immobilized in. . . integrated into Hep-2 cells was repaired by targetted integration of a functional allele of the gene. Targetting of the p53 tumor suppressor gene and the CFTR disease gene were demonstrated.

=> d ibib abs kwic 13

L42 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:488358 CAPLUS

DOCUMENT NUMBER: 115:88358

TITLE: Targeting radiosensitizers to DNA by attachment of an intercalating group: nitroimidazole-linked phenanthridines

AUTHOR(S): Cowan, D. S. M.; Panicucci, R.; McClelland, R. A.; Rauth, A. M.

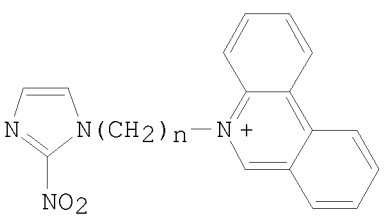
CORPORATE SOURCE: Exp. Ther. Div., Ontario Cancer Inst., Toronto, ON, Can.

SOURCE: Radiation Research (1991), 127(1), 81-9
CODEN: RAREAE; ISSN: 0033-7587

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I

AB The nitroimidazole-linked phenanthridine series of compds. (NLP-1, 2, and 3; I where n = 2-4) were synthesized under the assumption that it should be possible to enhance the molar efficiency of 2-nitroimidazoles as hypoxic cell radiosensitizers and cytotoxins by targeting them to their likely site of action, DNA. The targeting group chosen was the phenanthridine moiety, the major component of the classical DNA intercalating compound, ethidium bromide. The sole difference between the compds. is the length of the hydrocarbon chain linking the nitroimidazole to the phenanthridine. The phenanthridine group with a 3-carbon side chain, P-1, was also synthesized to allow studies on the effect of the targeting group by itself. The ability of the compds. to bind to DNA is inversely proportional to their linker chain length with binding constant values ranging from .apprx.1 + 105 mol-1 for NLP-2 to 6 + 105 mol-1 for NLP-3. The NLP compds. show selective toxicity to hypoxic cells at 37° at external drug concns. 10-40-fold lower than would be required for untargeted 2-nitroimidazoles such as misonidazole in vitro. Toxicity to both hypoxic and aerobic cells is dependent on the linker chain: the shorter the chain, the greater the toxicity. In addition, the NLP compds. radiosensitize hypoxic cells at external drug concns. as low as 0.05 mM with almost the full O effect being observed at a concentration of 0.5 mM. These concns. are 10-100-fold lower than would be required for similar radiosensitization using misonidazole. Radiosensitizing ability is independent of linker chain length. The present compds. represent prototypes for further studies of the efficacy and mechanism of action of 2-nitroimidazoles targeted to DNA by linkage to an intercalating group.

TI Targeting radiosensitizers to DNA by attachment of an intercalating group: nitroimidazole-linked phenanthridines

AB The nitroimidazole-linked phenanthridine series of compds. (NLP-1, 2, and 3; I where n = 2-4) were synthesized under the assumption that it should be possible to enhance the molar efficiency of 2-nitroimidazoles as hypoxic cell radiosensitizers and cytotoxins by targeting them to their likely site of action, DNA. The targeting group chosen was the phenanthridine moiety, the major component of the classical DNA intercalating compound, ethidium bromide. The sole difference between the compds. is the length of the hydrocarbon chain linking the nitroimidazole to the phenanthridine. The phenanthridine group with a 3-carbon side chain, P-1, was also synthesized to allow studies on the effect of the targeting group by itself. The ability of the compds. to bind to DNA is inversely proportional to their linker chain length with binding constant values ranging from .apprx.1 + 105 mol-1 for NLP-2 to 6 + 105 mol-1 for. . . required for untargeted 2-nitroimidazoles such as misonidazole in vitro. Toxicity to both hypoxic and aerobic cells is dependent on the linker chain: the shorter the chain, the greater the toxicity. In addition, the NLP compds. radiosensitize hypoxic cells at external drug. . . mM. These concns. are 10-100-fold lower than would be required for similar radiosensitization using misonidazole. Radiosensitizing ability is independent of linker chain length. The present compds. represent prototypes for further studies of the efficacy and mechanism of action of 2-nitroimidazoles targeted to DNA by linkage to an intercalating group.

ST nitroimidazole linked phenanthridine radiosensitizer DNA targeting

IT Deoxyribonucleic acids
RL: BIOL (Biological study)
(nitroimidazole-linked phenanthridine compds. targeting to, toxicity and radiosensitization in relation to)

IT Hypoxia
(nitroimidazole-linked phenanthridine compds. toxicity and radiosensitizing efficacy to CHO cells in, DNA targeting in

relation to)
IT Radiosensitizers, biological
(nitroimidazole-linked phenanthridine compds., of CHO cells to γ-rays, DNA targeting in relation to)
IT Neoplasm inhibitors
(radiosensitizing, nitroimidazole-linked phenanthridine compds. as, DNA targeting in relation to)
IT Gamma ray, biological effects
(sensitization to, of CHO cells by nitroimidazole-linked phenanthridine compds., DNA targeting in relation to)
IT 7782-44-7, Oxygen, biological studies
RL: BIOL (Biological study)
(nitroimidazole-linked phenanthridine compds. toxicity and radiosensitizing efficacy in CHO cells response to, DNA targeting in relation to)
IT 121064-77-5 135547-20-5 135547-21-6
RL: BIOL (Biological study)
(toxicity of and radiosensitization by, of CHO cells, DNA targeting in relation to)
IT 13551-87-6, Misonidazole 64433-58-5
RL: BIOL (Biological study)
(toxicity of and radiosensitization by, of CHO cells, nitroimidazole-linked phenanthridine compds. comparison with, DNA targeting in relation to)

=>

---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	45.36	127.22

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.60	-2.40

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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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 NEWS  1           Web Page for STN Seminar Schedule - N. America
 NEWS  2  DEC 01   ChemPort single article sales feature unavailable
 NEWS  3  JAN 06   The retention policy for unread STNmail messages
                   will change in 2009 for STN-Columbus and STN-Tokyo
 NEWS  4  JAN 07   WPIDS, WPINDEX, and WPIX enhanced Japanese Patent
                   Classification Data
 NEWS  5  FEB 02   Simultaneous left and right truncation (SLART) added
                   for CERAB, COMPUAB, ELCOM, and SOLIDSTATE
 NEWS  6  FEB 02   GENBANK enhanced with SET PLURALS and SET SPELLING
 NEWS  7  FEB 06   Patent sequence location (PSL) data added to USGENE
 NEWS  8  FEB 10   COMPENDEX reloaded and enhanced
 NEWS  9  FEB 11   WTEXTILES reloaded and enhanced
 NEWS 10  FEB 19   New patent-examiner citations in 300,000 CA/CAplus
                   patent records provide insights into related prior
                   art
 NEWS 11  FEB 19   Increase the precision of your patent queries -- use
                   terms from the IPC Thesaurus, Version 2009.01
 NEWS 12  FEB 23   Several formats for image display and print options
                   discontinued in USPATFULL and USPAT2
 NEWS 13  FEB 23   MEDLINE now offers more precise author group fields
                   and 2009 MeSH terms
 NEWS 14  FEB 23   TOXCENTER updates mirror those of MEDLINE - more
                   precise author group fields and 2009 MeSH terms
 NEWS 15  FEB 23   Three million new patent records blast AEROSPACE into
                   STN patent clusters
 NEWS 16  FEB 25   USGENE enhanced with patent family and legal status
                   display data from INPADOCDB
 NEWS 17  MAR 06   INPADOCDB and INPAFAMDB enhanced with new display
                   formats
 NEWS 18  MAR 11   EPFULL backfile enhanced with additional full-text
                   applications and grants
 NEWS 19  MAR 11   ESBIOBASE reloaded and enhanced
 NEWS 20  MAR 20   CAS databases on STN enhanced with new super role
                   for nanomaterial substances
 NEWS 21  MAR 23   CA/CAplus enhanced with more than 250,000 patent
                   equivalents from China
 NEWS 22  MAR 30   IMSPATENTS reloaded and enhanced
 NEWS 23  APR 03   CAS coverage of exemplified prophetic substances
                   enhanced
 NEWS 24  APR 07   STN is raising the limits on saved answers

 NEWS EXPRESS JUNE 27 08 CURRENT WINDOWS VERSION IS V8.3,
              AND CURRENT DISCOVER FILE IS DATED 23 JUNE 2008.

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                                                         ENTRY    SESSION
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FILE COVERS 1907 - 17 Apr 2009  VOL 150 ISS 17
FILE LAST UPDATED: 16 Apr 2009  (20090416/ED)

Caplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s intercal
=> s intercal?
L1       54926 INTERCAL?

=> s coupl? or link? or conjuga?
        943736 COUPL?
        576235 LINK?
        266737 CONJUGA?
L2     1707807 COUPL? OR LINK? OR CONJUGA?

=> s targeting
         94038 TARGETING
            10 TARGETINGS
L3       94040 TARGETING
                (TARGETING OR TARGETINGS)

=> s l1 and l2
L4        4499 L1 AND L2

=> d kwic

L4   ANSWER 1 OF 4499  CAPLUS  COPYRIGHT 2009 ACS on STN
AB   We have studied for the first time, the reproducible method of doping the
     CuO2 planes in (Cu0.5Tl0.5)Ba2Ca2Cu3O10-δ superconductor with the
     intercalation of Na at Cu0.5Tl0.5Ba2O4-δ charge reservoir
```

layer. The zero resistivity critical temperature T c (R = 0) and magnitude of. . . with Mg and Be, the T c (R = 0) and quantity of diamagnetism are suppressed. When these results are coupled with X-ray diffraction studies, it is seen that the decrease c-axes length with Mg and Be enhances the inter-plane coupling to such an extent that repulsion starts among the carriers, which possibly suppress the supercond. parameters. The self-doping of Na-doped. . .

=> s l1 (L) l2
L5 3695 L1 (L) L2

=> d ibib kwic

L5 ANSWER 1 OF 3695 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:438503 CAPLUS
TITLE: Enhanced superconductivity by Na doping in (Cu0.5Tl0.25Na0.25)Ba2Ca2Cu3O10-δ
AUTHOR(S): Khan, Nawazish A.; Hussain, Safeer
CORPORATE SOURCE: Materials Science Laboratory, Department of Physics, Quaid-i-Azam University, Islamabad, 45320, Pak.
SOURCE: Journal of Alloys and Compounds (2009), 475(1-2), 652-657
CODEN: JALCEU; ISSN: 0925-8388
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB We have studied for the first time, the reproducible method of doping the CuO2 planes in (Cu0.5Tl0.5)Ba2Ca2Cu3O10-δ superconductor with the intercalation of Na at Cu0.5Tl0.5Ba2O4-δ charge reservoir layer. The zero resistivity critical temperature T c (R = 0) and magnitude of. . . with Mg and Be, the T c (R = 0) and quantity of diamagnetism are suppressed. When these results are coupled with X-ray diffraction studies, it is seen that the decrease c-axes length with Mg and Be enhances the inter-plane coupling to such an extent that repulsion starts among the carriers, which possibly suppress the supercond. parameters. The self-doping of Na-doped. . .

=> l5 and l3
L5 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l5 and l3
L6 126 L5 AND L3

=> d ibib kwic

L6 ANSWER 1 OF 126 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:244149 CAPLUS
DOCUMENT NUMBER: 150:346919
TITLE: A Pseudocatenane Structure Formed between DNA and A Cyclic Bisintercalator
AUTHOR(S): Chu, Yongjun; Hoffman, David W.; Iverson, Brent L.
CORPORATE SOURCE: Department of Chemistry and Biochemistry, The University of Texas at Austin, Austin, TX, 78712, USA
SOURCE: Journal of the American Chemical Society (2009), 131(10), 3499-3508

CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Targeting double-stranded DNA with small mols. remains an active area of basic research. Herein is described a cyclic DNA bisintercalator that is based on two naphthalene diimide (NDI) intercalating units tethered by one linking element specific for binding in the minor groove and the other linking element specific for binding in the major groove. DNase I footprinting revealed a strong preference for binding the sequence 5'-GGTACC-3'.. . . the complex with d(CGGTACCG)2 verified a pseudocatenane structure in which the NDI units reside four base pairs apart, with one linker segment located in the minor groove and the other in the major groove consistent with the linker designs. To the best of our knowledge, this is the first structurally well-characterized pseudocatenane complex between a sequence specific cyclic. . .

=> d ibib kwic 2

L6 ANSWER 2 OF 126 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2009:137279 CAPLUS
TITLE: Synthesis, penetrability and intracellular targeting of fluorescein-tagged peptoids and peptide-peptoid hybrids
AUTHOR(S): Unciti-Broceta, Asier; Diezmann, Franziska; Ou-Yang, Chiung Ying; Fara, Mario Antonio; Bradley, Mark
CORPORATE SOURCE: School of Chemistry, University of Edinburgh, Edinburgh, EH9 3JJ, UK
SOURCE: Bioorganic & Medicinal Chemistry (2009), 17(3), 959-966
CODEN: BMECEP; ISSN: 0968-0896
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI Synthesis, penetrability and intracellular targeting of fluorescein-tagged peptoids and peptide-peptoid hybrids
AB . . . a major activity in the biotechnol. arena. Using highly optimized microwave based solid-phase chemical a series of fluorescein-labeled cationic peptoid conjugates (I-V) were synthesized within 24 h and cellular uptake into HeLa, L929 and K562 cells examined via flow cytometry. As. . . of nuclei delivery after 3 h, opening up a range of applications such as nuclei staining of living cells with non-DNA-intercalating fluorescent probes.
ST synthesis penetrability intracellular targeting fluorescein tagged peptoid peptide hybrid
IT INDEXING IN PROGRESS
IT INDEXING IN PROGRESS
IT Peptoids
RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
(and peptide hybrids; synthesis, penetrability and intracellular targeting of fluorescein-tagged peptoids and peptide-peptoid hybrids)
IT Chronic myeloid leukemia
(cell; synthesis, penetrability and intracellular targeting of fluorescein-tagged peptoids and peptide-peptoid hybrids)

```
IT   Peptides
     RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (peptoid hybrids; synthesis, penetrability and intracellular
        targeting of fluorescein-tagged peptoids and peptide-peptoid
        hybrids)
IT   Biological transport
        (permeation; synthesis, penetrability and intracellular
        targeting of fluorescein-tagged peptoids and peptide-peptoid
        hybrids)
IT   Cell nucleus
     Confocal laser scanning microscopy
     Fibroblast
     Fluorescence
     Fluorescence microscopy
     Fluorescent indicators
     Fluorometry
     HeLa cell
     Human
        (synthesis, penetrability and intracellular targeting of
        fluorescein-tagged peptoids and peptide-peptoid hybrids)
IT   Biological transport
        (uptake; synthesis, penetrability and intracellular targeting
        of fluorescein-tagged peptoids and peptide-peptoid hybrids)
IT   124-09-4, 1,6-Hexanediamine   5437-45-6, Benzyl 2-bromoacetate
     24424-99-5   72088-94-9, 5-(6)-Carboxy fluorescein   82911-69-1, Fmoc-OSu
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (synthesis, penetrability and intracellular targeting of
        fluorescein-tagged peptoids and peptide-peptoid hybrids)


=> s antibod?
L7      552147 ANTIBOD?

=> d his

     (FILE 'HOME' ENTERED AT 08:32:21 ON 17 APR 2009)

     FILE 'CAPLUS' ENTERED AT 08:32:32 ON 17 APR 2009
L1        54926 S INTERCAL?
L2      1707807 S COUPL? OR LINK? OR CONJUGA?
L3        94040 S TARGETING
L4         4499 S L1 AND L2
L5         3695 S L1 (L) L2
L6          126 S L5 AND L3
L7       552147 S ANTIBOD?

=> s l5 and l7
L8          128 L5 AND L7

=> d ibib kwic

L8   ANSWER 1 OF 128  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:        2008:842511  CAPLUS
DOCUMENT NUMBER:         150:53933
TITLE:                   The immunohistochemical localization of secretory IgA
                         in the submandibular gland of the Mongolian gerbil
AUTHOR(S):               Liu, Yuehuan; Chen, Xiwen; Wu, Jiusheng
CORPORATE SOURCE:        Zhejiang Centre of Laboratory Animals, Zhejiang
                         Academy of Medical Sciences, Hangzhou, Peop. Rep.
                         China
SOURCE:                  Archives of Medical Science (2008), 4(1), 22-25
```

CODEN: AMSRDQ; ISSN: 1734-1922
PUBLISHER: Termedia Publishing House
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB . . . be discriminated into a secretory portion and a duct portion. The former mainly included serous acini and the latter contained intercalated ducts, striated ducts, granular convoluted tubules and interlobular ducts. IgA can be regularly visualized by 80°C heat isotope antibody retrieval (HIAR) after neutral formaldehyde fixation. The 1:100 HRP-conjugated goat anti-rat IgA is an effective antibody for evaluation of the IgA distribution in the gerbil. The results also demonstrated that the incubation time and temperature of primary antibody also influenced the staining results. IgA-pos. cells were regularly presented in serous acini, intercalated ducts, striated ducts, granular convoluted ducts and interlobular ducts. They were also visualized in the connective tissues among the acini. . .

IT Antibodies and Immunoglobulins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(IgA, secretory; immunohistochem. localization of secretory IgA in submandibular gland of Mongolian gerbil)

```
=> s acridine or ellipticin or carbazole or benzimidazole
         19658 ACRIDINE
          1800 ACRIDINES
         20083 ACRIDINE
                 (ACRIDINE OR ACRIDINES)
             8 ELLIPTICIN
         19157 CARBAZOLE
          2414 CARBAZOLES
         19787 CARBAZOLE
                 (CARBAZOLE OR CARBAZOLES)
         26682 BENZIMIDAZOLE
          6495 BENZIMIDAZOLES
         28177 BENZIMIDAZOLE
                 (BENZIMIDAZOLE OR BENZIMIDAZOLES)
L9       66847 ACRIDINE OR ELLIPTICIN OR CARBAZOLE OR BENZIMIDAZOLE

=> d his

     (FILE 'HOME' ENTERED AT 08:32:21 ON 17 APR 2009)

     FILE 'CAPLUS' ENTERED AT 08:32:32 ON 17 APR 2009
L1        54926 S INTERCAL?
L2      1707807 S COUPL? OR LINK? OR CONJUGA?
L3        94040 S TARGETING
L4         4499 S L1 AND L2
L5         3695 S L1 (L) L2
L6          126 S L5 AND L3
L7       552147 S ANTIBOD?
L8          128 S L5 AND L7
L9        66847 S ACRIDINE OR ELLIPTICIN OR CARBAZOLE OR BENZIMIDAZOLE

=> d l9 (L) l2
L2 IS NOT VALID HERE
For an explanation, enter "HELP DISPLAY".

=> s l9 (L) l2
L10       4581 L9 (L) L2
```

```
=> s l10 and l7
L11        116 L10 AND L7

=> s l11 and chelat?
        150014 CHELAT?
L12          6 L11 AND CHELAT?

=> d ibib kwic 1-6

L12  ANSWER 1 OF 6  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         2009:24490  CAPLUS
DOCUMENT NUMBER:          150:142453
TITLE:                    MHC multimers and conjugates for use in diagnosis,
                          prognosis and therapy of cancer, infection, immune and
                          autoimmune disease
INVENTOR(S):              Brix, Liselotte; Pedersen, Henrik; Jakobsen, Tina;
                          Schoeller, Joergen; Lohse, Jesper; Brunstedt, Katja;
                          Jacobsen, Kivin
PATENT ASSIGNEE(S):       Dako Denmark A/S, Den.
SOURCE:                   PCT Int. Appl., 470pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   3
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 2009003492         A1    20090108    WO 2008-DK50167         20080703
         W:  AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
             CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,
             FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
             ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
             PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
             IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
             TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                       DK 2007-972          A  20070703
                                             DK 2007-973          A  20070703
                                             DK 2007-974          A  20070703
                                             DK 2007-975          A  20070703
                                             US 2007-929581P      P  20070703
                                             US 2007-929582P      P  20070703
                                             US 2007-929583P      P  20070703
                                             US 2007-929586P      P  20070703
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
REFERENCE COUNT:          7     THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT   Selectins
     RL: ARU (Analytical role, unclassified); BSU (Biological study,
     unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU
     (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES
     (Uses)
        (E-, antibody to; MHC multimers and conjugates for use in
        diagnosis, prognosis and therapy of cancer, infection, immune and
        autoimmune disease)
IT   Antibodies and Immunoglobulins
```

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA1; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA2; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgD; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgE; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG1; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG2; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG3; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG4; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)
IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM, M1; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)
IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM, M2; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)
IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)
IT Selectins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L-, antibody to; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)
IT Acholeplasma phage v5
Acylation
Alkylation
Alleles
Ambrosia
Amidation
Amide group
Amino group
Amphibia
Animal organ
Animal tissue
Animal tissue culture
Animal virus
Animalia
Animals
Anti-infective agents
Antigen-presenting cell
Antioxidants
Antitumor agents
Apoptosis
Aptamers
Armoracia rusticana
Artemisia
Arylation
Aspergillus fumigatus
Atomic force microscopy

Autoimmune disease
Aves
B cell
B19 virus
BK virus
Bacterial infection
Baculoviridae
Basophil
Betula
Biochips
Biomarkers
Birds
Blood
Blood analysis
Blood cell
Blood serum
Body fluid
Bone marrow
Borrelia afzelii
Borrelia burgdorferi
Borrelia garinii
Bos taurus
Brain
CD8-positive T cell
Camelidae
Camelus
Canavalia ensiformis
Candida albicans
Canis familiaris
Carbonyl group
Carboxyl group
Cat
Cattle
Cell differentiation
Cell membrane
Cell nucleus
Cerebrospinal fluid
  Chelating agents
Chemiluminescent substances
Chicken
Chicken
Chromatography
Chromophores
Circular dichroism
Coiled-coil
Condensation reaction
Confocal laser scanning microscopy
Conjugation (bond)
Corylus
Cryptococcus neoformans
Culture media
Cyano group
Cycloaddition reaction
Cytomegalovirus
Cytotoxic T cell
Cytotoxicity
Cytotoxicity
Dermatophagoides
Detergents
Diagnostic agents
Dialysis
Dilution

Dimerization
Dog
Drugs
Dyes
Electron microscopy
Energy level excitation
Enzyme-linked immunosorbent assay
Eosinophil
Epitopes
Equus caballus
Escherichia coli
Eubacteria
Eukaryota
Felis catus
Fish
Flow cytometry
Fluorescence microscopy
Fluorescence resonance energy transfer
Fluorescent dyes
Fluorescent substances
Formyl group
Gallus gallus
Gallus gallus
Gel electrophoresis
Gel electrophoresis
Gorilla
HPLC
Haemophilus influenzae
Heat
Helicobacter pylori
Helper T cell
Hepatitis B virus
Hepatitis C virus
Histoplasma capsulatum
Horse
Horseradish
Human
Human T-lymphotropic virus 1
Human adenovirus
Human herpesvirus 1
Human herpesvirus 2
Human herpesvirus 3
Human herpesvirus 4
Human herpesvirus 6A
Human herpesvirus 6B
Human herpesvirus 7
Human herpesvirus 8
Human immunodeficiency virus 1
Human immunodeficiency virus 1
Human papillomavirus
Hybridoma
Hydrogels
Hydroxyl group
Immune disease
Immunohistochemistry
Immunostimulants
Immunosuppressants
Inclusion bodies
Infection
Influenza
Ion exchange chromatography
Ionophores

JC virus
Leishmania donovani
Leishmania tropica
Light
Light
Linking agents
Listeria monocytogenes
Lymph
Lymphocyte
Macaca
Mammalia
Meleagris gallopavo
Membrane, biological
Microarray technology
Microorganism
Microparticles
Microscopy
Microtiter plates
Mold (fungus)
Molecules
Monkey
Monocyte
Mouse
Mus musculus
Mutagenesis
Mutagenesis
Mycobacterium bovis
Mycobacterium tuberculosis
Mycosis
NMR (nuclear magnetic resonance)
NMR spectroscopy
Nanoparticles
Neoplasm
Neutrophil
Nucleophiles
Optical absorption
Optical reflection
Oryctolagus cuniculus
Ovis aries
Oxidizing agents
Pan (genus)
Paramagnetic materials
Parasite
Pharmaceutical capsules
Pharmaceutical carriers
Pharmaceutical gels
Pharmaceutical liposomes
Pharmaceutical liquids
Pharmaceutical micelles
Pharmaceutical particles
Pharmaceutical solids
Pharmaceutical suspensions
Phosphorescence
Plasmodium falciparum
Plasmodium malariae
Plasmodium vivax
Pneumocystis carinii
Poaceae
Pollen
Polymerase chain reaction
Polymorphonuclear leukocyte
Pongo pygmaeus

Preservatives
Primates
Prognosis
Protein degradation
Protein sequences
Rabbit
Radical scavengers
Rattus
Reagents
Redox reaction
Reducing agents
Reptilia
Scanning electron microscopy
Scanning probe microscopy
Scanning tunneling microscopy
Schistosoma haematobium
Schistosoma japonicum
Schistosoma mansoni
Schistosoma mansoni
Semen
Sheep
Sieves
Simian virus 40
Size-exclusion chromatography
Size-exclusion chromatography
Solubility
Spheres
Spleen
Sputum
Stabilizing agents
Staphylococcus
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Selectins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(P; antibody to; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT CD34 (antigen)
CD44 (antigen)
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(antibody to; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(bispecific; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(chimeric; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Albumins, biological studies
Antibodies and Immunoglobulins
Enzymes, biological studies
Peptides, biological studies
Proteins
Ricins
Toxins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, Fab; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, bi-Fab; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, diabody; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, domain; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, maxibody; MHC multimers and conjugates for use in

diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, minibody; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, nanobody; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, scFv; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(heavy chain; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(humanized; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(immobilized; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
Nucleotides, biological studies
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(labeled; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES

(Uses)
(monoclonal, neutralizing; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monovalent; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(multispecific; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(neutralizing; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(polyclonal; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(single chain; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(trispecific; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT 50-00-0, Formaldehyde, biological studies 50-18-0, Cyclophosphamide 50-70-4, Sorbitol, biological studies 50-81-7, Ascorbic acid, biological

studies 51-28-5, DNP, biological studies 52-90-4, L-Cysteine, biological studies 54-64-8, Thiomersal 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-81-5, Glycerol, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 57-48-7, Fructose, biological studies 57-50-1, Saccharose, biological studies 57-55-6D, Propylene glycol, polymers and copolymers 58-85-5, Biotin 59-02-9, α-Tocopherol 59-05-2, Methotrexate 59-23-4, Galactose, biological studies 61-90-5, L-Leucine, biological studies 63-42-3, Lactose 64-17-5, Ethanol, biological studies 65-61-2, Acridine orange 67-56-1, Methanol, biological studies 67-97-0, Vitamin D3 69-65-8, Mannitol 69-79-4, Maltose 70-18-8, Glutathione, biological studies 71-43-2, Benzene, biological studies 77-77-0, Vinyl sulfone 77-86-1, Tris, buffer 81-88-9 87-79-6, Sorbose 99-20-7, Trehalose 107-41-5, 2-Methyl-2,4-pentanediol 107-43-7, Betaine 111-30-8, Glutardialdehyde 128-37-0, Butylated hydroxytoluene, biological studies 132-32-1, 3-Amino-9-ethyl-carbazole 144-62-7D, Oxalic acid, ester 147-81-9, Arabinose 147-85-3, L-Proline, biological studies 288-32-4, Imidazole, biological studies 302-04-5, Thiocyanate, biological studies 446-72-0 446-86-6, Azathioprine 512-69-6, Raffinose 521-31-3, Luminol 541-59-3, Maleimide 594-14-9, Guanidinium sulfate 643-79-8, 1,2-Benzenedicarboxaldehyde 661-20-1, Isocyanate 737-31-5, Hypaque 779-27-1 1309-38-2, Magnetite, biological studies 1398-61-4, Chitin 1404-04-2, Neomycin 1672-46-4, Digoxigenin 1948-33-0, TBHQ 1971-57-9 2321-07-5, Fluorescein 3443-45-6, 1-Pyrenebutanoic acid 3458-28-4, Mannose 3682-14-2, Isoluminol 3929-61-1 4432-31-9, MES 5556-48-9, Ribulose 5777-20-8, 3(2H)-Isoxazolone 6358-69-6, 8-Hydroxypyrene-1,3,6-trisulfonic acid, trisodium salt 7235-40-7, β-Carotene 7240-37-1, 7-AAD 7365-45-9, HEPES 7439-97-6D, Mercury, organic derivs. 7440-48-4D, Cobalt, isotopes, biological studies 7440-57-5, Gold, biological studies 7487-88-9, Magnesium sulfate, biological studies 7631-86-9, Silica, biological studies 7647-14-5, Sodium chloride, biological studies 7723-14-0D, Phosphorus, isotopes, biological studies 7782-49-2D, Selenium, isotopes, biological studies 7783-20-2, Ammonium sulfate, biological studies 7791-25-5, Sulfonyl chloride 9000-11-7, Carboxymethylcellulose 9000-30-0, Guar 9000-81-1, Acetylcholine esterase 9000-92-4, Amylase 9001-05-2, Catalase 9001-37-0, Glucose oxidase 9001-40-5, Glucose-6-phosphate dehydrogenase 9001-64-3, Malate dehydrogenase 9001-78-9, Alkaline phosphatase 9001-99-4 9002-10-2, Tyrosinase 9002-13-5, Urease 9002-88-4, Polyethylene 9002-89-5, Poly(vinyl alcohol) 9002-93-1D, Triton X-100, derivs. 9002-98-6D, Polyaziridine, derivs. 9003-01-4D, Polyacrylic acid, derivs. 9003-05-8D, Polyacrylamide, cross-linked derivative 9003-07-0, Polypropylene 9003-11-6, Propylene oxide-ethylene oxide copolymer 9003-39-8D, Poly(vinylpyrrolidone), copolymers 9003-53-6, Polystyrene 9003-99-0, Peroxidase 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-70-0, Nitrocellulose 9004-74-4, Monomethoxy-polyethylene glycol 9005-25-8, Starch, biological studies 9005-49-6, Heparin, biological studies 9005-64-5, Tween 20 9007-27-6, Chondroitin 9011-14-7D, Polymethylmethacrylate, NHS-activated derivative 9012-36-6, Agarose 9012-76-4, Chitosan 9013-53-0, Nuclease, staphylococcal 9014-63-5, Xylan 9014-74-8, Enterokinase 9015-68-3, Asparaginase 9016-45-9, NP-40 9023-78-3, Triose phosphate isomerase 9031-11-2, β-Galactosidase 9031-36-1 9031-72-5, Alcohol dehydrogenase 9032-08-0, Glucoamylase 9032-46-6, Sulfoethylcellulose 9034-32-6, Hemicellulose 9036-88-8, Mannan 9037-22-3, Amylopectin 9041-35-4, Sephadex G 25 9041-36-5, Sephadex G 200 9044-05-7, Carboxymethyldextran 9048-71-9, Sephadex G 50 9050-68-4, Sephadex G 10 9050-94-6, Sephadex G 100 9075-65-4, α-Glycerophosphate

dehydrogenase 10028-17-8D, Tritium, isotopes
11024-24-1, Digitonin 11028-71-0, Con A 11062-77-4, Superoxide
11078-30-1, Galactomannan 11081-40-6, Sephadex G 15 11138-66-2,
Xanthan 12619-70-4, Cyclodextrin 12774-36-6, Sephadex G 150
19163-87-2, Gulose 20461-54-5D, Iodide, isotopes, biological studies
22559-71-3D, Acridinium, theromatic ester or salt 23593-75-1,
Clotrimazole 24937-47-1, Polyarginine 25013-16-5, BHA 25212-18-4,
Polyarginine 25535-16-4D, Propidium iodide, DNA adduct 26062-48-6,
Polyhistidine 26628-22-8, Sodium azide 26638-03-9 26854-81-9,
Polyhistidine 26913-06-4, Poly[imino(1,2-ethanediyl)] 27072-45-3,
Fluorescein isothiocyanate 37224-29-6, Sephadex G 75 37293-51-9,
Aminodextran 37317-99-0, Dextran polyaldehyde 38183-12-9,
Fluorescamine 39455-90-8, Pyrazolone 39562-70-4, Nitrendipine
41994-02-9, Biotinyl tyramide 47165-04-8, DAPI 50812-37-8, Glutathione
S-transferase 50924-49-7, Mizoribine 50995-74-9,
7-Diethylamino-coumarin-3-carboxylic acid 53123-88-9, Rapamycin
53188-07-1, Trolox 61970-00-1, Luciferase 62996-74-1, Staurosporine
63368-54-7, 5-Iodoacetamidofluorescein 63478-55-7, Tandem 64134-30-1,
(L-His)6 66836-18-8, Diaminobenzidine 70563-58-5, Herbimycin A
71936-81-7 72088-94-9, Carboxy fluorescein 74812-15-0, Tween 100
77045-20-6, Fast red 79217-60-0, Cyclosporin 80307-12-6, GMBS
80883-54-1, 7-Dimethylamino-coumarin-4-acetic acid 89149-10-0,
15-Deoxyspergualin 95751-30-7, Charybdotoxin 96801-39-7 97639-11-7,
Ficoll, Hypaque 98849-88-8, FLAG peptide 102185-03-5 104987-11-3, FK
506 106562-32-7, 7-Amino-4-methylcoumarin-3-acetic acid 109489-77-2,
Tetranectin 110617-70-4, Tetronic 116874-53-4, Sepharose Q
120178-12-3, Telomerase 121559-53-3, Tresyl monomethoxypolyethylene
glycol 122375-06-8 128028-50-2, Leukocyte proteinase 3 132823-72-4,
Sepharose S 138039-55-1 146368-14-1, Cy5 146368-16-3, Cy3
151709-76-1, Polyethylene glycol propionaldehyde 153652-88-1,
3-Perylenedodecanoic acid 157199-63-8, TO-Pro-3 169799-14-8, Cy 7
172777-84-3, Cy5.5 173485-12-6 174722-31-7, Rituxan 189767-45-1, Cy
3.5 195136-58-4, Oregon Green 488 202484-04-6, Melizitose
213128-97-3, SP-Sepharose XL 215868-23-8, Marina blue 215868-31-8,
Pacific Blue 220578-59-6 220930-95-0, Cascade Yellow 244636-14-4
247144-92-9 247144-99-6, AlexaFluor 488 247145-11-5, AlexaFluor 532
247145-23-9, AlexaFluor 546 247145-38-6, AlexaFluor 568 247145-86-4,
AlexaFluor 594 254098-36-7, DraQ5
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); MOA
(Modifier or additive use); THU (Therapeutic use); ANST (Analytical
study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis
and therapy of cancer, infection, immune and autoimmune disease)

L12 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:356568 CAPLUS
DOCUMENT NUMBER: 138:363805
TITLE: Detection of nucleic acid sequences by isothermal RNA polymerase-dependent primer extension
INVENTOR(S): Hanna, Michelle M.
PATENT ASSIGNEE(S): Ribomed, Inc., USA; Ribomed Technologies, Inc.
SOURCE: PCT Int. Appl., 183 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003038042	A2	20030508	WO 2002-US34419	20021029
WO 2003038042	A3	20040325		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 20030099950	A1	20030529	US 2001-984664		20011030
US 7045319	B2	20060516			
CA 2465158	A1	20030508	CA 2002-2465158		20021029
AU 2002360306	A1	20030512	AU 2002-360306		20021029
EP 1451366	A2	20040901	EP 2002-795555		20021029
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK					
JP 2006507792	T	20060309	JP 2003-540307		20021029
US 20040054162	A1	20040318	US 2003-425037		20030429
US 20040137461	A1	20040715	US 2003-600581		20030623
US 20040234996	A1	20041125	US 2003-602045		20030624
US 7468261	B2	20081223			
US 20050026150	A1	20050203	US 2003-607136		20030627
US 7226738	B2	20070605			
US 20040175724	A1	20040909	US 2003-686713		20031017
US 20040157257	A1	20040812	US 2004-790766		20040303
US 7473775	B2	20090106			
US 7470511	B2	20081230	US 2004-488971		20041018
US 20050064414	A1	20050324			
PRIORITY APPLN. INFO.:			US 2001-984664	A	20011030
			WO 2002-US34419	W	20021029

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(for protein capture; detection of nucleic acid sequences by isothermal RNA polymerase-dependent primer extension)

IT 67-43-6D, primer conjugates 81-88-9D, derivs., primer conjugates 81-88-9D, Rhodamine B, primer conjugates 83-88-5D, Riboflavin, primer conjugates 88-68-6D, Anthranilamide, primer conjugates 90-33-5D, 4-Methylumbelliferone, primer conjugates 91-64-5D, Coumarin, derivs., primer conjugates 129-00-0D, Pyrene, derivs., primer conjugates 143-74-8D, Phenol Red, primer conjugates 260-94-6D, Acridine, derivs., primer conjugates 569-61-9D, Pararosaniline, primer conjugates 574-93-6D, Phthalocyanine, primer conjugates 596-27-0D, o-Cresolphthalein, primer conjugates 605-65-2D, Dansyl chloride, primer conjugates 633-00-1D, Rosolic acid, primer conjugates 643-79-8D, o-Phthaldialdehyde, primer conjugates 2321-07-5D, Fluorescein, derivs., primer conjugates 3520-42-1D, Sulforhodamine B, primer conjugates 3546-21-2D, Ethidium, primer conjugates 3604-79-3D, m-Nitrotyrosine, primer conjugates 7440-27-9D, Terbium, chelates, primer conjugates 7612-98-8D, DABITC, primer conjugates 7613-08-3D, Acridine 2-isothiocyanate, primer conjugates 16423-68-0D, Erythrosin B, primer conjugates 16574-43-9D, Bromopyrogallol Red, primer conjugates 17372-87-1D, Eosin, derivs., primer conjugates 17681-50-4D, Reactive Red 4, primer conjugates 23627-89-6D, Naphthalocyanine, primer conjugates 25338-56-1D, Pyrenebutyric acid, primer conjugates 26093-31-2D, Coumarin 120, primer conjugates 27072-45-3D, FITC, primer conjugates 27816-59-7D, 4-Acetamido-4'-isothiocyanatostilbene-2,2'-disulfonic acid, primer conjugates 38183-12-9D, Fluorescamine, primer conjugates 47165-04-8D, DAPI, primer conjugates 50402-56-7D, EDANS, primer conjugates

51306-35-5D, DTAF, primer conjugates 53005-05-3D, 4,4'-Diisothiocyanatostilbene-2,2'-disulfonic acid, primer conjugates 53518-15-3D, 7-Amino-4-trifluoromethylcoumarin, primer conjugates 54849-69-3D, IR 144, primer conjugates 60311-02-6D, Sulforhodamine 101, primer conjugates 60520-47-0D, Eosin isothiocyanate, primer conjugates 61481-03-6D, primer conjugates 62669-70-9D, Rhodamine 123, primer conjugates 70281-37-7D, Tetramethyl rhodamine, primer conjugates 76823-03-5D, FAM, primer conjugates 82344-98-7D, XRITC, primer conjugates 82354-19-6D, Texas Red sulfonyl chloride, primer conjugates 82855-40-1D, JOE, primer conjugates 107347-53-5D, TRITC, primer conjugates 107743-39-5D, primer conjugates 120718-39-0D, ROX, primer conjugates 120718-52-7D, TAMRA, primer conjugates 138026-71-8D, BODIPY, primer conjugates 147492-82-8D, Malachite green isothiocyanate, primer conjugates 154088-80-9D, La Jolla Blue, primer conjugates 169799-14-8D, Cy7, primer conjugates 172777-84-3D, Cy5.5, primer conjugates 251102-88-2D, IRD 700, primer conjugates 256651-38-4D, IRD 800, primer conjugates 500723-56-8D, IR 1446, primer conjugates 522600-44-8D, primer conjugates 522600-45-9D, primer conjugates 522600-46-0D, primer conjugates 524019-23-6D, primer conjugates
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(as reporter; detection of nucleic acid sequences by isothermal RNA polymerase-dependent primer extension)

L12 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2003:173820 CAPLUS
DOCUMENT NUMBER: 138:182042
TITLE: Methods for haplotyping analysis by detection of single nucleotide polymorphisms
INVENTOR(S): Fenger, Mogens; Bentzen, Joan
PATENT ASSIGNEE(S): Hvidovre Hospital, Den.
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003018835	A2	20030306	WO 2002-DK552	20020822
WO 2003018835	A3	20040325		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002336070	A1	20030310	AU 2002-336070	20020822
PRIORITY APPLN. INFO.:			DK 2001-1252 A	20010823
			WO 2002-DK552 W	20020822

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG, oligonucleotide probe conjugate; methods for haplotyping anal. by detection of single nucleotide polymorphisms)
IT Antibodies and Immunoglobulins

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(anti-hapten, oligonucleotide probe coupled to; methods for haplotyping anal. by detection of single nucleotide polymorphisms)

IT Haptens
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(antibodies for oligonucleotide probe coupling; methods for haplotyping anal. by detection of single nucleotide polymorphisms)

IT Chelating agents
(ion, oligonucleotide probe conjugate; methods for haplotyping anal. by detection of single nucleotide polymorphisms)

IT 58-85-5D, Biotin, oligonucleotide probe conjugate 66-97-7D, Psoralene, nucleic acid conjugate 84-65-1D, Anthraquinone, nucleic acid conjugate 91-64-5D, Coumarin, nucleic acid conjugate 98-86-2D, Acetophenone, nucleic acid conjugate 106-51-4D, Quinone, nucleic acid conjugate, biological studies 119-61-9D, Benzophenone, nucleic acid conjugate 120-72-9D, Indole, nucleic acid conjugate 260-94-6D, Acridine, oligonucleotide probe conjugate 271-89-6D, Benzofuran, nucleic acid conjugate 521-31-3D, Luminol, oligonucleotide probe conjugate 2321-07-5D, Fluorescein, oligonucleotide probe conjugate 7440-19-9D, Samarium, oligonucleotide probe conjugate 7440-53-1D, Europium, oligonucleotide probe conjugate 9001-78-9D, Alkaline phosphatase, oligonucleotide probe conjugate 9002-13-5D, Urease, oligonucleotide probe conjugate 9013-20-1D, Streptavidin, oligonucleotide probe conjugate 9014-00-0D, Luciferase, oligonucleotide probe conjugate 9031-11-2D, β-Galactosidase, oligonucleotide probe conjugate 9032-92-2D, Glycosidase, oligonucleotide probe conjugate 9040-07-7D, Chloramphenicol acetyltransferase, oligonucleotide probe conjugate 12184-91-7D, H-3, oligonucleotide probe conjugate, biological studies 13558-31-1D, oligonucleotide probe conjugate 13966-05-7D, Ca-45, oligonucleotide probe conjugate, biological studies 14158-31-7D, I-125, oligonucleotide probe conjugate, biological studies 14596-37-3D, P-32, oligonucleotide probe conjugate, biological studies 14762-75-5D, C-14, oligonucleotide probe conjugate, biological studies 15117-53-0D, S-35, oligonucleotide probe conjugate, biological studies 15749-66-3D, P-33, oligonucleotide probe conjugate, biological studies 23491-45-4D, Hoechst 33258, oligonucleotide probe conjugate 70281-37-7D, TetramethylRhodamine, oligonucleotide probe conjugate 82354-19-6D, Texas Red, oligonucleotide probe conjugate 102185-03-5D, Cy2, oligonucleotide probe conjugate 169799-14-8D, Cy7, oligonucleotide probe conjugate 172777-84-3D, Cy5.5, oligonucleotide probe conjugate 189200-71-3D, Rhodamine green, oligonucleotide probe conjugate 189767-45-1D, Cy3.5, oligonucleotide probe conjugate
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(methods for haplotyping anal. by detection of single nucleotide polymorphisms)

L12 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1996:161185 CAPLUS
DOCUMENT NUMBER: 124:197760
ORIGINAL REFERENCE NO.: 124:36463a,36466a
TITLE: Photocleavable agents and conjugates for the detection and isolation of biomolecules.
INVENTOR(S): Rothschild, Kenneth J.; Sonar, Sanjay M.; Olejnik, Jerzy
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 149 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9531429	A1	19951123	WO 1995-US5555	19950511
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN				
US 5643722	A	19970701	US 1994-240511	19940511
US 5986076	A	19991116	US 1994-345807	19941122
AU 9526359	A	19951205	AU 1995-26359	19950511
EP 763009	A1	19970319	EP 1995-921230	19950511
EP 763009	B1	20040908		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 10500409	T	19980113	JP 1995-529698	19950511
JP 4058704	B2	20080312		
EP 1415995	A2	20040506	EP 2003-78381	19950511
EP 1415995	A3	20040512		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
AT 275539	T	20040915	AT 1995-921230	19950511
US 6210941	B1	20010403	US 1999-290325	19990412
US 6344320	B1	20020205	US 1999-307579	19990507
US 6596481	B1	20030722	US 1999-335018	19990617
US 6358689	B1	20020319	US 2000-583243	20000531
US 20020123032	A1	20020905	US 2001-943120	20010830
US 6566070	B2	20030520		
US 20030059785	A1	20030327	US 2001-34736	20011227
US 6919179	B2	20050719		
US 20040033514	A1	20040219	US 2003-401251	20030327
US 7169558	B2	20070130		
US 20060024704	A1	20060202	US 2005-145781	20050606
US 7211394	B2	20070501		
US 20070172849	A1	20070726	US 2006-589425	20061030
US 20070148680	A1	20070628	US 2006-639121	20061214

PRIORITY APPLN. INFO.:	US 1994-240511	A	19940511
	US 1994-345807	A	19941122
	EP 1995-921230	A3	19950511
	WO 1995-US5555	W	19950511
	US 1997-884325	A1	19970627
	US 1999-290325	A1	19990412
	US 1999-307579	A1	19990507
	US 1999-335018	A1	19990617
	US 2000-583243	A1	20000531
	US 2000-605483	B1	20000628
	US 2001-943120	A1	20010830
	US 2001-34736	A1	20011227
	US 2003-401251	A1	20030327
	US 2005-145781	A1	20050606

OTHER SOURCE(S): MARPAT 124:197760

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Antibodies
Avidins
Carbohydrates and Sugars, uses
Glycoproteins, uses
Halides
Haptens
Hormone receptors
Hormones
Nitroxides
Radioelements, uses

Receptors
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and conjugates for detection and isolation of biomols.)

IT 260-94-6, Acridine 7440-18-8D, Ruthenium, chelates 9013-20-1, Streptavidin 11028-71-0, Concanavalin A 14809-11-1D, Phosphoramidous acid, derivs., linkers 73467-76-2, Benzopyrene
RL: ARG (Analytical reagent use); NUU (Other use, unclassified); ANST (Analytical study); USES (Uses)
(photocleavable agents and conjugates for detection and isolation of biomols.)

L12 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1990:512011 CAPLUS
DOCUMENT NUMBER: 113:112011
ORIGINAL REFERENCE NO.: 113:18897a,18900a
TITLE: Lipid-containing carrier-hydrophobic reporter substance reagents and methods for determination of analytes
INVENTOR(S): Horan, Paul Karl; Muirhead, Katharine A.; Machy, Patrick; Koegel, Andrea; Gray, Brian David
PATENT ASSIGNEE(S): Zynaxis Technologies, Inc., USA
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 9002334	A1	19900308	WO 1989-US3727		19890828
W: AU, DK, FI, JP, KR					
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE					
AU 8944001	A	19900323	AU 1989-44001		19890828
PRIORITY APPLN. INFO.:			US 1988-238958	A	19880831
			WO 1989-US3727	A	19890828

OTHER SOURCE(S): MARPAT 113:112011
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB . . . Liposomes were prepared from dipalmitoyl phosphatidylcholine, cholesterol, dipalmitoyl phosphatidylethanolamine 3-(2-pyridylthio)propionate, and N-[3-sulfopropyl]-4-[p-didecylaminostyryl]pyridinium, inner salt (reporter substance) and conjugated to anti-H2Kk antibody. The liposome reagent was used to label and enumerate splenocytes.

IT Bacteria
Fungi
Parasite
Virus
(antigen of, detection of, lipid carrier bearing hydrophobic reporter and antibodies for)

IT Erythrocyte
Hematopoietic precursor cell
Leukocyte
(detection and determination of subsets of, liposome carrier bearing hydrophobic reporter and antibodies for)

IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(detection of, lipid carrier bearing hydrophobic reporter and antibodies for)

IT Immunochemical analysis
(lipid carrier bearing hydrophobic reporter and antibodies for)
IT Antibodies
RL: ANST (Analytical study)
(lipid carrier bearing hydrophobic reporter substance and, for immunoassays)
IT Antigens
RL: ANST (Analytical study)
(H-2Kk, antibody to, conjugates with liposome bearing hydrophobic fluorochrome, as reporter reagent for fluorescence microscopy and flow cytometry)
IT Antigens
RL: ANST (Analytical study)
(Lyt-1, antibody to, conjugates with liposome bearing hydrophobic fluorochrome, as reporter reagent for fluorescence microscopy and flow cytometry)
IT Lymphocyte
(T-, detection and determination of subsets of, liposome carrier bearing hydrophobic reporter and antibodies for)
IT Coordination compounds
RL: ANST (Analytical study)
(chelates, lipid carrier bearing specific binding substance and, as reporter reagent for specific binding assays)
IT Fluorometry
(flow, in cytometry, splenocytes labeled with antibody- and hydrophobic fluorochrome-bearing liposomes anal. by)
IT Microscopy
(fluorescence, splenocytes labeled with antibody- and hydrophobic fluorochrome-bearing liposomes anal. by)
IT Immunochemical analysis
(fluorescence immunoassay, lipid carrier bearing hydrophobic reporter and antibodies for)
IT Immunochemical analysis
(liposome immunoassay, lipid component bearing hydrophobic reporter and antibodies for)
IT Spleen, composition
(splenocyte, labeled with antibody- and hydrophobic fluorochrome-bearing liposomes, anal. of, by fluorescence microscopy and flow cytometry)
IT 84-65-1D, Anthraquinone, conjugates with lipid carrier bearing specific binding substances 91-22-5D, Quinoline, conjugates with lipid carrier bearing specific binding substances 91-64-5D, Coumarin, conjugates with lipid carrier bearing specific binding substances 92-83-1D, Xanthene, conjugates with lipid carrier bearing specific binding substances 92-84-2D, 10H-Phenothiazine, conjugates with lipid carrier bearing specific binding substances 110-86-1D, Pyridine, conjugates with lipid carrier bearing specific binding substances 135-67-1D, Phenoxazine, conjugates with lipid carrier bearing specific binding substances 260-94-6D, Acridine, conjugates with lipid carrier bearing specific binding substances 1333-74-0D, Hydrogen, radioactive, conjugates with lipid carrier bearing specific binding substances 2235-12-3D, Hexatriene, conjugates with lipid carrier bearing specific binding substances 7429-91-6D, Dysprosium, chelates, conjugates with lipid carrier bearing specific binding substances 7439-89-6D, Iron, chelates, conjugates with lipid carrier bearing specific binding substances 7439-96-5D, Manganese, chelates, conjugates with lipid carrier bearing specific binding substances 7440-00-8D, Neodymium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-02-0D, Nickel, chelates, conjugates with lipid carrier bearing specific binding substances 7440-10-0D, Praseodymium, chelates, conjugates with

lipid carrier bearing specific binding substances 7440-12-2D, Promethium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-13-3D, Protactinium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-19-9D, Samarium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-20-2D, Scandium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-27-9D, Terbium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-32-6D, Titanium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-44-0D, Carbon, radioactive, conjugates with lipid carrier bearing specific binding substances 7440-47-3D, Chromium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-48-4D, Cobalt, chelates, conjugates with lipid carrier bearing specific binding substances 7440-50-8D, Copper, chelates, conjugates with lipid carrier bearing specific binding substances 7440-53-1D, Europium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-54-2D, Gadolinium, chelates, conjugates with lipid carrier bearing specific binding substances 7440-62-2D, Vanadium, chelates, conjugates with lipid carrier bearing specific binding substances 7553-56-2D, Iodine, radioactive, conjugates with lipid carrier bearing specific binding substances 7704-34-9D, Sulfur, radioactive, conjugates with lipid carrier bearing specific binding substances 7723-14-0D, Phosphorus, radioactive, conjugates with lipid carrier bearing specific binding substances 7727-37-9D, Nitrogen, radioactive, conjugates with lipid carrier bearing specific binding substances 7782-41-4D, Fluorine, radioactive, conjugates with lipid carrier bearing specific binding substances 7782-49-2D, Selenium, radioactive, conjugates with lipid carrier bearing specific binding substances 7782-50-5D, Chlorine, radioactive, conjugates with lipid carrier bearing specific binding substances 70807-63-5D, conjugates with lipid carrier bearing specific binding substances 95378-73-7D, conjugates with lipid carrier bearing specific binding substances 129180-44-5D, conjugates with lipid carrier bearing specific binding substances 129180-45-6D, conjugates with lipid carrier bearing specific binding substances 129180-46-7D, conjugates with lipid carrier bearing specific binding substances 129180-47-8D, conjugates with lipid carrier bearing specific binding substances 129180-48-9D, conjugates with lipid carrier bearing specific binding substances 129180-49-0D, conjugates with lipid carrier bearing specific binding substances
RL: ANST (Analytical study)
(as reporter reagent for specific binding assays)

IT 68181-17-9D, antibody and lipid conjugates 129180-50-3D, antibody conjugates
RL: ANST (Analytical study)
(liposomes containing hydrophobic fluorochrome and, as reporter reagent for fluorescence microscopy and flow cytometry)

L12 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1990:95107 CAPLUS
DOCUMENT NUMBER: 112:95107
ORIGINAL REFERENCE NO.: 112:16099a,16102a
TITLE: Nonnucleotide linking reagents for nucleotide probes
INVENTOR(S): Arnold, Lyle John; Reynolds, Mark Alan; Bhatt, Ram Saroop
PATENT ASSIGNEE(S): ML Technology Ventures, L.P., USA
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8902439	A1	19890323	WO 1988-US3173	19880920
W: AU, DK, FI, JP, KR, NO				
AU 8824856	A	19890417	AU 1988-24856	19880920
AU 630076	B2	19921022		
JP 02503146	T	19901004	JP 1988-507941	19880920
JP 3012244	B2	20000221		
CA 1339303	C	19970819	CA 1988-577911	19880920
JP 2000119199	A	20000425	JP 1998-378356	19880920
EP 313219	A2	19890426	EP 1988-308766	19880921
EP 313219	A3	19900530		
EP 313219	B1	19960508		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 137755	T	19960515	AT 1988-308766	19880921
ES 2086300	T3	19960701	ES 1988-308766	19880921
FI 8902434	A	19890519	FI 1989-2434	19890519
DK 8902447	A	19890630	DK 1989-2447	19890519
NO 8902042	A	19890720	NO 1989-2042	19890522
KR 9705898	B1	19970421	KR 1989-70894	19890522
US 5656744	A	19970812	US 1995-490109	19950607

PRIORITY APPLN. INFO.:		US 1987-99050	A	19870921
		JP 1988-507941	A3	19880920
		PT 1988-88550	A	19880920
		WO 1988-US3173	A	19880920
		US 1989-319422	B1	19890306
		US 1994-182666	A3	19940114

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Chelating agents
(metal, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)

IT Antibodies
RL: ANST (Analytical study)
(to fluorescein isothiocyanate, immobilized, binding to oligonucleotide hybridization probe containing fluorescein isothiocyanate)

IT Spheres
(micro-, magnetic, with antibody to fluorescein isothiocyanate, binding to oligonucleotide hybridization probe containing fluorescein isothiocyanate)

IT 66-97-7, 7H-Furo[3,2-g][1]benzopyran-7-one 260-94-6, Acridine 3546-21-2, Ethidium 65589-70-0D, Acriflavine, derivs.
RL: ANST (Analytical study)
(as intercalator ligand in multifunctional coupling reagent for nucleic acid hybridization probe)

An alternative to view hit terms when display exceeds KWIC processing limits is to use HIT display format.

=> d his

(FILE 'HOME' ENTERED AT 08:32:21 ON 17 APR 2009)

FILE 'CAPLUS' ENTERED AT 08:32:32 ON 17 APR 2009
L1 54926 S INTERCAL?
L2 1707807 S COUPL? OR LINK? OR CONJUGA?
L3 94040 S TARGETING
L4 4499 S L1 AND L2
L5 3695 S L1 (L) L2

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L6          126 S L5 AND L3
L7       552147 S ANTIBOD?
L8          128 S L5 AND L7
L9        66847 S ACRIDINE OR ELLIPTICIN OR CARBAZOLE OR BENZIMIDAZOLE
L10        4581 S L9 (L) L2
L11         116 S L10 AND L7
L12           6 S L11 AND CHELAT?

=> s l11 and ligand
        363957 LIGAND
        248178 LIGANDS
        494943 LIGAND
                  (LIGAND OR LIGANDS)
L13         22 L11 AND LIGAND

=> s l13 and metal
       1918898 METAL
        957022 METALS
       2324978 METAL
                  (METAL OR METALS)
L14          3 L13 AND METAL

=> d ibib kwic 1-3

L14  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER:         2009:24490  CAPLUS
DOCUMENT NUMBER:          150:142453
TITLE:                    MHC multimers and conjugates for use in diagnosis,
                          prognosis and therapy of cancer, infection, immune and
                          autoimmune disease
INVENTOR(S):              Brix, Liselotte; Pedersen, Henrik; Jakobsen, Tina;
                          Schoeller, Joergen; Lohse, Jesper; Brunstedt, Katja;
                          Jacobsen, Kivin
PATENT ASSIGNEE(S):       Dako Denmark A/S, Den.
SOURCE:                   PCT Int. Appl., 470pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   3
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     WO 2009003492         A1    20090108    WO 2008-DK50167         20080703
         W:  AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
             CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES,
             FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE,
             KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
             ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
             PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
             IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
             TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
             TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:                       DK 2007-972          A  20070703
                                             DK 2007-973          A  20070703
                                             DK 2007-974          A  20070703
                                             DK 2007-975          A  20070703
                                             US 2007-929581P      P  20070703
                                             US 2007-929582P      P  20070703
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US 2007-929583P P 20070703
US 2007-929586P P 20070703
SYSTEM LIMIT EXCEEDED DURING KWIC/STRING SEARCH
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT CD antigens
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CD134, ligand; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Cytokines
Cytokines
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CD30 ligand; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Glycoproteins
Glycoproteins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(CD40-L (antigen CD40 ligand); MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Selectins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(E-, antibody to; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Proteins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(ICOS (inducible co-stimulator), and ligand; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA1; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA2; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgA; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgD; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgE; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG1; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG2; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG3; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG4; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgG; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM, M1; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM, M2; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IgM; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Selectins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(L-, antibody to; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Fas ligand
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Fas ligand
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Heavy metals
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Ligands
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Rare earth metals, biological studies
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Selectins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(P; antibody to; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT CD34 (antigen)
CD44 (antigen)
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(antibody to; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Carboxylic acids, biological studies
Metals, biological studies
Resins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(beads; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(bispecific; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(chimeric; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Albumins, biological studies
Antibodies and Immunoglobulins
Enzymes, biological studies
Peptides, biological studies
Proteins
Ricins
Toxins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)

(fragments, Fab; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, bi-Fab; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, diabody; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, domain; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, maxibody; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, minibody; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, nanobody; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(fragments, scFv; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU

(Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(heavy chain; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(humanized; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(immobilized; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
Nucleotides, biological studies
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(labeled; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal, neutralizing; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monoclonal; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(monovalent; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(multispecific; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins

RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(neutralizing; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(polyclonal; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(single chain; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT Antibodies and Immunoglobulins
RL: ARU (Analytical role, unclassified); BSU (Biological study, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(trispecific; MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

IT 50-00-0, Formaldehyde, biological studies 50-18-0, Cyclophosphamide 50-70-4, Sorbitol, biological studies 50-81-7, Ascorbic acid, biological studies 51-28-5, DNP, biological studies 52-90-4, L-Cysteine, biological studies 54-64-8, Thiomersal 56-40-6, Glycine, biological studies 56-41-7, L-Alanine, biological studies 56-45-1, L-Serine, biological studies 56-81-5, Glycerol, biological studies 56-84-8, L-Aspartic acid, biological studies 56-85-9, L-Glutamine, biological studies 56-86-0, L-Glutamic acid, biological studies 56-87-1, L-Lysine, biological studies 57-48-7, Fructose, biological studies 57-50-1, Saccharose, biological studies 57-55-6D, Propylene glycol, polymers and copolymers 58-85-5, Biotin 59-02-9, α-Tocopherol 59-05-2, Methotrexate 59-23-4, Galactose, biological studies 61-90-5, L-Leucine, biological studies 63-42-3, Lactose 64-17-5, Ethanol, biological studies 65-61-2, Acridine orange 67-56-1, Methanol, biological studies 67-97-0, Vitamin D3 69-65-8, Mannitol 69-79-4, Maltose 70-18-8, Glutathione, biological studies 71-43-2, Benzene, biological studies 77-77-0, Vinyl sulfone 77-86-1, Tris, buffer 81-88-9 87-79-6, Sorbose 99-20-7, Trehalose 107-41-5, 2-Methyl-2,4-pentanediol 107-43-7, Betaine 111-30-8, Glutardialdehyde 128-37-0, Butylated hydroxytoluene, biological studies 132-32-1, 3-Amino-9-ethyl-carbazole 144-62-7D, Oxalic acid, ester 147-81-9, Arabinose 147-85-3, L-Proline, biological studies 288-32-4, Imidazole, biological studies 302-04-5, Thiocyanate, biological studies 446-72-0 446-86-6, Azathioprine 512-69-6, Raffinose 521-31-3, Luminol 541-59-3, Maleimide 594-14-9, Guanidinium sulfate 643-79-8, 1,2-Benzenedicarboxaldehyde 661-20-1, Isocyanate 737-31-5, Hypaque 779-27-1 1309-38-2, Magnetite, biological studies 1398-61-4, Chitin 1404-04-2, Neomycin 1672-46-4, Digoxigenin 1948-33-0, TBHQ 1971-57-9 2321-07-5, Fluorescein 3443-45-6, 1-Pyrenebutanoic acid 3458-28-4, Mannose 3682-14-2, Isoluminol 3929-61-1 4432-31-9, MES 5556-48-9, Ribulose 5777-20-8, 3(2H)-Isoxazolone 6358-69-6,

8-Hydroxypyrene-1,3,6-trisulfonic acid, trisodium salt 7235-40-7, β-Carotene 7240-37-1, 7-AAD 7365-45-9, HEPES 7439-97-6D, Mercury, organic derivs. 7440-48-4D, Cobalt, isotopes, biological studies 7440-57-5, Gold, biological studies 7487-88-9, Magnesium sulfate, biological studies 7631-86-9, Silica, biological studies 7647-14-5, Sodium chloride, biological studies 7723-14-0D, Phosphorus, isotopes, biological studies 7782-49-2D, Selenium, isotopes, biological studies 7783-20-2, Ammonium sulfate, biological studies 7791-25-5, Sulfonyl chloride 9000-11-7, Carboxymethylcellulose 9000-30-0, Guar 9000-81-1, Acetylcholine esterase 9000-92-4, Amylase 9001-05-2, Catalase 9001-37-0, Glucose oxidase 9001-40-5, Glucose-6-phosphate dehydrogenase 9001-64-3, Malate dehydrogenase 9001-78-9, Alkaline phosphatase 9001-99-4 9002-10-2, Tyrosinase 9002-13-5, Urease 9002-88-4, Polyethylene 9002-89-5, Poly(vinyl alcohol) 9002-93-1D, Triton X-100, derivs. 9002-98-6D, Polyaziridine, derivs. 9003-01-4D, Polyacrylic acid, derivs. 9003-05-8D, Polyacrylamide, cross-linked derivative 9003-07-0, Polypropylene 9003-11-6, Propylene oxide-ethylene oxide copolymer 9003-39-8D, Poly(vinylpyrrolidone), copolymers 9003-53-6, Polystyrene 9003-99-0, Peroxidase 9004-34-6, Cellulose, biological studies 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-70-0, Nitrocellulose 9004-74-4, Monomethoxy-polyethylene glycol 9005-25-8, Starch, biological studies 9005-49-6, Heparin, biological studies 9005-64-5, Tween 20 9007-27-6, Chondroitin 9011-14-7D, Polymethylmethacrylate, NHS-activated derivative 9012-36-6, Agarose 9012-76-4, Chitosan 9013-53-0, Nuclease, staphylococcal 9014-63-5, Xylan 9014-74-8, Enterokinase 9015-68-3, Asparaginase 9016-45-9, NP-40 9023-78-3, Triose phosphate isomerase 9031-11-2, β-Galactosidase 9031-36-1 9031-72-5, Alcohol dehydrogenase 9032-08-0, Glucoamylase 9032-46-6, Sulfoethylcellulose 9034-32-6, Hemicellulose 9036-88-8, Mannan 9037-22-3, Amylopectin 9041-35-4, Sephadex G 25 9041-36-5, Sephadex G 200 9044-05-7, Carboxymethyldextran 9048-71-9, Sephadex G 50 9050-68-4, Sephadex G 10 9050-94-6, Sephadex G 100 9075-65-4, α-Glycerophosphate dehydrogenase 10028-17-8D, Tritium, isotopes, biological studies 11024-24-1, Digitonin 11028-71-0, Con A 11062-77-4, Superoxide 11078-30-1, Galactomannan 11081-40-6, Sephadex G 15 11138-66-2, Xanthan 12619-70-4, Cyclodextrin 12774-36-6, Sephadex G 150 19163-87-2, Gulose 20461-54-5D, Iodide, isotopes, biological studies 22559-71-3D, Acridinium, theromatic ester or salt 23593-75-1, Clotrimazole 24937-47-1, Polyarginine 25013-16-5, BHA 25212-18-4, Polyarginine 25535-16-4D, Propidium iodide, DNA adduct 26062-48-6, Polyhistidine 26628-22-8, Sodium azide 26638-03-9 26854-81-9, Polyhistidine 26913-06-4, Poly[imino(1,2-ethanediyl)] 27072-45-3, Fluorescein isothiocyanate 37224-29-6, Sephadex G 75 37293-51-9, Aminodextran 37317-99-0, Dextran polyaldehyde 38183-12-9 39455-90-8, Pyrazolone 39562-70-4, Nitrendipine 41994-02-9, Biotinyl tyramide 47165-04-8, DAPI 50812-37-8, Glutathione S-transferase 50924-49-7, Mizoribine 50995-74-9, 7-Diethylamino-coumarin-3-carboxylic acid 53123-88-9, Rapamycin 53188-07-1, Trolox 61970-00-1, Luciferase 62996-74-1, Staurosporine 63368-54-7, 5-Iodoacetamidofluorescein 63478-55-7, Tandem 64134-30-1, (L-His)6 66836-18-8, Diaminobenzidine 70563-58-5, Herbimycin A 71936-81-7 72088-94-9, Carboxy fluorescein 74812-15-0, Tween 100 77045-20-6, Fast red 79217-60-0, Cyclosporin 80307-12-6, GMBS 80883-54-1, 7-Dimethylamino-coumarin-4-acetic acid 89149-10-0, 15-Deoxyspergualin 95751-30-7, Charybdotoxin 96801-39-7 97639-11-7, Ficoll, Hypaque 98849-88-8, FLAG peptide 102185-03-5 104987-11-3, FK 506 106562-32-7, 7-Amino-4-methylcoumarin-3-acetic acid 109489-77-2, Tetranectin 110617-70-4, Tetronic 116874-53-4, Sepharose Q 120178-12-3, Telomerase 121559-53-3, Tresyl monomethoxypolyethylene glycol 122375-06-8 128028-50-2, Leukocyte proteinase 3 132823-72-4, Sepharose S 138039-55-1 146368-14-1, Cy5 146368-16-3, Cy3 151709-76-1, Polyethylene glycol propionaldehyde 153652-88-1,

3-Perylenedodecanoic acid 157199-63-8, TO-Pro-3 169799-14-8, Cy 7 172777-84-3, Cy5.5 173485-12-6 174722-31-7, Rituxan 189767-45-1, Cy 3.5 195136-58-4, Oregon Green 488 202484-04-6, Melizitose 213128-97-3, SP-Sepharose XL 215868-23-8, Marina blue 215868-31-8, Pacific Blue 220578-59-6 220930-95-0, Cascade Yellow 244636-14-4 247144-92-9 247144-99-6, AlexaFluor 488 247145-11-5, AlexaFluor 532 247145-23-9, AlexaFluor 546 247145-38-6, AlexaFluor 568 247145-86-4, AlexaFluor 594 254098-36-7, DraQ5
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); MOA (Modifier or additive use); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MHC multimers and conjugates for use in diagnosis, prognosis and therapy of cancer, infection, immune and autoimmune disease)

L14 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 2007:912245 CAPLUS
DOCUMENT NUMBER: 147:270169
TITLE: Electrochemical hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications
INVENTOR(S): Labgold, Marc R.; Jokhadze, George G.; Jen, I-Min Michael; Shen, Naiping; Kozlowski, Mark T.; Ammini, Chandramohan V.; Suhy, David A.; Norris, Michael C.; Lobban, Peter
PATENT ASSIGNEE(S): Antara Biosciences Inc., USA
SOURCE: PCT Int. Appl., 188pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
WO 2007092552	A2	20070816	WO 2007-US3353		20070207
WO 2007092552	A3	20071227			
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
US 20090036315	A1	20090205	US 2007-703103		20070207
PRIORITY APPLN. INFO.:			US 2006-765740P	P	20060207
			US 2006-801703P	P	20060519
			US 2006-801950P	P	20060519
			US 2006-802002P	P	20060519
			US 2006-802039P	P	20060519
			US 2006-802049P	P	20060519
			US 2006-808862P	P	20060526
			US 2006-812826P	P	20060612
			US 2006-814566P	P	20060616
			US 2006-815105P	P	20060620
			US 2006-830131P	P	20060711
			US 2006-846318P	P	20060921
			US 2006-848657P	P	20061002

US 2006-850016P P 20061006
US 2006-858831P P 20061114
US 2006-812859P P 20060612

AB . . . a sample by rapid and specific electrochem. detection. Target agents in a sample are captured by a capture moiety (e.g., antibody) conjugated to an oligonucleotide, wherein the oligonucleotide serves as a ploy for presence of the target agent in a sample. . . . to the electrode-associated oligos is described. Preparation and use of loaded scaffolds using gold particles for the scaffold substrate and antibodies as the capture moiety is disclosed.

ST electrochem biosensor chip nucleic acid hybridization capture assocd oligonucleotide; electrode nucleic acid hybridization capture assocd oligonucleotide antibody conjugate; diagnosis electrochem biosensor nucleic acid hybridization capture assocd oligonucleotide

IT Metals, biological studies
RL: ARU (Analytical role, unclassified); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conductive layers; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Ligands
RL: ARG (Analytical reagent use); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugated; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT DNA
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates, with monoclonal antibody; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Antibodies and Immunoglobulins
Antigens
Hormones, animal, biological studies
Nucleic acids
Proteins
Receptors
Toxins
RL: ARG (Analytical reagent use); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(conjugates; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Films
(elec. conductive, metal; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Antigens
Hormones, animal, biological studies
Ligands
Nucleic acids
Proteins
Receptors
Toxins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL

(Biological study); USES (Uses)
(electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Staphylococcal protein A
Transition metal complexes
RL: ARG (Analytical reagent use); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Electric conductors
(films, metal; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal, conjugates, with DNA; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT Antibodies and Immunoglobulins
RL: ARG (Analytical reagent use); BPN (Biosynthetic preparation); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(monoclonal; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

IT 50-07-7 50-76-0, Actinomycin D 65-61-2 66-71-7D, 1,10-Phenanthroline, zinc, ruthenium, and cobalt complexes 92-62-6, 3,6-Acridinediamine 260-94-6, Acridine 519-23-3 1239-45-8 1402-38-6, Actinomycin 3546-21-2 7440-06-4D, Platinum, complexes with phenathroline, bipyridine, and terpyridine 7440-18-8D, Ruthenium, phenanthroline and bipyridine complexes 7440-48-4D, Cobalt, phenathroline and bipyridine complexes 7440-66-6D, Zinc, phenanthroline and bipyridine complexes 20830-81-3 23491-45-4 23491-52-3 25316-40-9 27254-80-4, Acridinamine 37275-48-2D, Bipyridine, platinum, zinc, ruthenium, and cobalt complexes 47165-04-8 57576-44-0 72496-41-4 72847-58-6D, Terpyridine, platinum complexes
RL: ARG (Analytical reagent use); DGN (Diagnostic use); TEM (Technical or engineered material use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(intercalating agent; electrochem. hybridization biosensor chip using capture-associated oligonucleotides conjugated to capture moieties, and diagnostic applications)

L14 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2009 ACS on STN
ACCESSION NUMBER: 1990:95107 CAPLUS
DOCUMENT NUMBER: 112:95107
ORIGINAL REFERENCE NO.: 112:16099a,16102a
TITLE: Nonnucleotide linking reagents for nucleotide probes
INVENTOR(S): Arnold, Lyle John; Reynolds, Mark Alan; Bhatt, Ram Saroop
PATENT ASSIGNEE(S): ML Technology Ventures, L.P., USA
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8902439	A1	19890323	WO 1988-US3173	19880920
W: AU, DK, FI, JP, KR, NO				
AU 8824856	A	19890417	AU 1988-24856	19880920
AU 630076	B2	19921022		
JP 02503146	T	19901004	JP 1988-507941	19880920
JP 3012244	B2	20000221		
CA 1339303	C	19970819	CA 1988-577911	19880920
JP 2000119199	A	20000425	JP 1998-378356	19880920
EP 313219	A2	19890426	EP 1988-308766	19880921
EP 313219	A3	19900530		
EP 313219	B1	19960508		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 137755	T	19960515	AT 1988-308766	19880921
ES 2086300	T3	19960701	ES 1988-308766	19880921
FI 8902434	A	19890519	FI 1989-2434	19890519
DK 8902447	A	19890630	DK 1989-2447	19890519
NO 8902042	A	19890720	NO 1989-2042	19890522
KR 9705898	B1	19970421	KR 1989-70894	19890522
US 5656744	A	19970812	US 1995-490109	19950607

PRIORITY APPLN. INFO.:

US 1987-99050	A	19870921
JP 1988-507941	A3	19880920
PT 1988-88550	A	19880920
WO 1988-US3173	A	19880920
US 1989-319422	B1	19890306
US 1994-182666	A3	19940114

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The title reagents comprise a nonnucleotide monomeric unit having a ligand and 1st and 2nd coupling groups. The ligand can be either a chemical moiety such as a label, intercalator, drug, protein, etc.; or an activatable or protected linking. . . provided are reagents I and II [X1 = O, S, NH, HN:N; X2 = halogen, substituted amino; R4X3 is the ligand (when the ligand is a protected linking arm, X3 is the linking arm and R4 is the protecting group); X4 = halogen, amino,. . . polymers having any desired sequence of nucleotide and nonnucleotide monomeric units, each of the latter of which bears a desired ligand. The polymers can be used as hybridization probes exhibiting enhanced activity and/or are capable of detecting a genus of nucleotides,. . .

IT Catalysts and Catalysis
Labels
Pharmaceuticals
Haptens
Hormones
Peptides, biological studies
Proteins, biological studies
RL: ANST (Analytical study)
(as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)

IT Radicals, biological studies
RL: BIOL (Biological study)
(generators of, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)

IT Monomers
RL: ANST (Analytical study)
(ligand-containing multifunctional coupling reagent as, oligonucleotide hybridization probes containing)

IT Chains, chemical
(ligand-containing multifunctional coupling reagent in, for oligonucleotide hybridization probes)
IT Chelating agents
(metal, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)
IT Solubility
(nucleotide multimer, substance altering, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)
IT Biological transport
(of DNA, agent modifying, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)
IT Nucleic acid hybridization
(preparation of ligand-containing multifunctional coupling reagent for probe of)
IT Chlamydia trachomatis
(rRNA of, hybridization probe containing ligand-containing multifunctional coupling reagent to)
IT Nucleotides, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ligand-containing multifunctional coupling reagent, for hybridization probe preparation)
IT Antibodies
RL: ANST (Analytical study)
(to fluorescein isothiocyanate, immobilized, binding to oligonucleotide hybridization probe containing fluorescein isothiocyanate)
IT Onium compounds
RL: ANST (Analytical study)
(acridinium, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)
IT Onium compounds
RL: ANST (Analytical study)
(acridinium, esters, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)
IT Luminescent substances
(chemi-, acridinium esters, as label in ligand-containing multifunctional coupling reagent for nucleic acid hybridization probe)
IT Inclusion compounds
RL: ANST (Analytical study)
(intercalation, as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)
IT Spheres
(micro-, magnetic, with antibody to fluorescein isothiocyanate, binding to oligonucleotide hybridization probe containing fluorescein isothiocyanate)
IT 66-97-7, 7H-Furo[3,2-g][1]benzopyran-7-one 260-94-6, Acridine 3546-21-2, Ethidium 65589-70-0D, Acriflavine, derivs.
RL: ANST (Analytical study)
(as intercalator ligand in multifunctional coupling reagent for nucleic acid hybridization probe)
IT 58-85-5, Biotin 81-88-9 2321-07-5, Fluorescein 25154-54-5, Dinitrobenzene 82354-19-6, Texas Red
RL: ANST (Analytical study)
(as label in ligand-containing multifunctional coupling reagent for nucleic acid hybridization probe)
IT 9026-81-7, Nuclease
RL: ANST (Analytical study)
(as ligand in multifunctional coupling reagent for oligonucleotide hybridization probe)
IT 125384-97-6
RL: RCT (Reactant); RACT (Reactant or reagent)

(hydrolysis of, modification with ligand-containing multifunctional coupling reagent in relation to)
IT 125348-36-9P 125348-37-0P 125348-38-1P 125348-39-2P 125348-40-5P 125348-41-6P 125348-42-7P 125348-43-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as ligand-containing multifunctional coupling reagent for nucleic acid hybridization probe)
IT 14739-10-7P 17216-62-5P 54567-18-9P 69380-65-0P 114642-96-5P 125348-18-7P 125348-19-8P 125348-20-1P 125348-21-2P 125348-22-3P 125348-23-4P 125348-24-5P 125348-25-6P 125348-26-7P 125348-27-8P 125348-28-9P 125348-29-0P 125348-30-3P 125348-31-4P 125348-32-5P 125348-33-6P 125348-34-7P 125348-35-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, in preparation of ligand-containing multifunctional coupling reagent for nucleic acid hybridization probe)
IT 77-76-9, 2,2-Dimethoxypropane 98-59-9, p-Toluenesulfonyl chloride 105-53-3, Diethyl malonate 106-69-4, 1,2,6-Trihydroxyhexane 383-64-2, S-Ethyl trifluorothioacetate 616-30-8, 3-Amino-1,2-propanediol 1444-05-9 2417-90-5, 3-Bromopropionitrile 3282-30-2, Trimethyl acetyl chloride 7087-68-5, N,N-Diisopropylethylamine 40615-36-9, Dimethoxytrityl chloride 82911-69-1, 9-Fluorenylmethylsuccinimidyl carbonate 86030-43-5 88574-06-5 113484-74-5 116821-47-7 125348-17-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of ligand-containing multifunctional coupling reagent for nucleic acid hybridization probe)
IT 121832-30-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with ligand-containing multifunctional coupling reagent, for nucleic acid hybridization probe)
IT 9025-82-5, Phosphodiesterase
RL: ANST (Analytical study)
(resistance of oligonucleotide hybridization probe containing ligand-containing multifunctional coupling reagent to hydrolysis by)

An alternative to view hit terms when display exceeds KWIC processing limits is to use HIT display format.

=>

---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	75.05	75.27

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-6.56	-6.56

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